Instructions
IN
CLINICAL MEDICINE,

Given at the London Hospital by

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(*Reported for* THE LANCET *and Revised by the Author.*)

INTRODUCTORY: THE METHODS OF CLINICAL INSTRUCTION.

GENTLEMEN,—I am much touched by and very grateful to you for this cordial reception. May I be enabled to continue worthy of your confidence. I enjoy to-day a great and valued privilege. Until now this hospital had no proper clinical theatre, and clinical instructions, which, next to the treatment of the sick, constitute one of the main duties of such an institution, were given in odd corners as convenience and other circumstances permitted. To-day, however, the new theatre is opened, and the privilege which I enjoy is the privilege of inaugurating the courses of clinical instruction hereafter to be given therein. We begin here and now the course of what is conventionally called clinical medicine. What is clinical medicine? It is that department of medical knowledge which occupies itself with the study of individual cases of disease as distinguished from that other department of medicine which occupies itself with the study of disease in general. It is that part of medicine which guides you to the investigation and discovery of the symptoms and signs of disease, to the classification of their relations, to the interpretation of their meaning, and to the elucidation of their bearing upon the general system and upon the course of the disease of which they are indications. It is that part of medicine which enables you to determine the nature of the particular disease with which you are dealing, to predict its course, to forecast its issues, and to determine the means most suitable for averting death, relieving suffering, or bringing about a cure. Such, briefly and imperfectly stated, are the objects of clinical medicine. It is for the sake of clinical medicine that all your previous studies have been undertaken. It is for the sake of becoming practitioners that you have studied physics, chemistry, anatomy, physiology, therapeutics, and pathology. For all these branches of knowledge supply information absolutely essential to the accurate and adequate conduct of clinical inquiry. Let me illustrate this, in passing, by reference to the secretion of urine. We have in clinical investigation to deal, as I was saying to you, with symptoms of disorder and of disease. Now, no single symptom exists in complete isolation; every symptom holds with other symptoms and conditions numerous varied and intimate relations. The secretion of urine is not, then, a solitary, simple, unrelated fact. And when we require to understand fully and rightly the influences at work in its production we have to search into the conditions of digestion, assimilation, the circulation of the blood, the variations of blood-pressure, the dynamic and structural conditions of the kidneys, and the state and action of the nervous system presiding over all. And when healthy urine becomes diseased urine, the clinical inquirer is compelled to investigate the condition of each of those factors in the evolution of the secretion of healthy urine, in order that he may discover to what alteration of what factors such diseased condition is due. Here you will discover the necessity of those branches of knowledge in the acquisition of which you have been hitherto engaged; here you will discover that physiology, a knowledge of the conditions of healthy structure and action, is one of the main foundations of the art of medicine; and here you will also discover that the very knowledge which enables you to inquire into and understand the nature of disease is in itself a constituent of the disease which you are striving to discover. Clinical medicine, then, is at once the object and end of all your previous studies; it is in a sense the closing and the crowning of all your former work, and it is the means whereby you are to make yourselves sound and true practitioners in the art and craft of medicine.

The study of clinical medicine is the most difficult of all the other studies in which you have been hitherto engaged, for it requires the possession of many different kinds of knowledge; and to use them aright it requires, furthermore, the careful exercise, not only of the higher mental, but also of the higher moral faculties of our nature; and no one can have any just hope of becoming practised in clinical medicine who does not devote himself patiently and perseveringly to the study of it. There are two other conditions which are above all others necessary to the success of this work: the one is that the attention which you give to it shall be undivided, and the other is that it shall be thorough. When you are engaged in the work of clinical medicine it is not tolerable that you shall be concurrently engaged in cramming for examinations upon other subjects. Clinical medicine is a jealous goddess, and never grants her highest favours to a divided worship. Furthermore, remember that your methods of working now will determine with unalterable certainty what your work and character and life are to be hereafter. Do not commit yourself to many cases at a time, for doing that will bring about superficiality, inaccuracy, and a loss of that calm seriousness without which just and wise judgments are impossible. In this study, before all other studies, it is required that you shall be thorough. Practise thoroughness now, and it will soon become a habit, and the habit of thoroughness will make for you the trustiest mental and moral gymnastic; it will develop your other faculties, it will elevate and strengthen your whole nature, and it will keep you in the way of rendering the highest service to men and of giving the truest help to the advancement of knowledge.

There are several methods of teaching clinical medicine. In one method the teacher prepares a lecture on a particular disease, giving his views of its nature, embodying his experience of its treatment, and selecting his illustrations from successive or concurrent cases in the wards. In a second method, the teacher, with the help of his house physician and clerks, prepares the case of a particular patient, determines the diagnosis, settles the treatment, and, assembling his students, reads to them the complete account of his investigation. In a third method the teacher collects his students round the bedside of the patient, listens to the story of the case, examines and compares the symptoms and signs of disease, considers and determines the diagnosis, forecasts the issues, and gives his reasons for the treatment which he proposes to pursue. From time to time the case is re-examined, the course which it has followed is discussed, and the treatment is revised. If death puts an end to the case, the results of the necropsy are considered in their relations to the assemblage and progression of symptoms which have constituted the external manifestations of the disease. In a fourth method the teacher endeavours to make the conditions of teaching resemble as nearly as is practicable the conditions of practice encountered by the medical man on commencing the practice of his art. Nothing is known beforehand of the patient to be examined. He is brought into the theatre, and the teacher, with the assistance of his students, proceeds to investigate the case, just as if the patient were a private patient, and the doctor were alone in the management of it. The symptoms and signs of disease are elicited, their relations and meaning are discussed, the diagnosis is considered and made, the prognosis is weighed, the treatment to be pursued is settled, and the report to be given to the patient and his friends is arranged.

The two first methods convey information, and, as usually practised, the information is of the highest character and conveyed in the ablest manner. But neither of them conveys a true instruction; neither of them constitutes a method of true education; both have grave defects, and one of the chief defects is that they do not make you think. The criterion of true instruction is not acquiring, but thinking. Genuine clinical teaching cannot be conducted through the medium of mere books and lectures: it requires the active coöperation of teacher and of taught, the assimilation as well as the acquisition of knowledge; seeing, handling, doing, as well as trying, failing, and succeeding. The third method, supplemented in the lecture room by retrospects and revisions, has the fewest defects and the greatest advantages, and is, on the whole, the most suitable for the conveyance of practical instruction in the art of medicine. Nevertheless, this is not the method which I purpose following in the present course of clinical instruction. I purpose following the fourth method, be-

cause it will afford us greater freedom of investigation; it will assimilate our conditions of work more closely than any other method will do to those methods under which the doctor, just qualified, will commence his practice; and it will be better adapted for the class of cases with which I wish to make you practically acquainted. There are three classes of cases to be met with in our hospital: the class of acute diseases, the class of chronic diseases, and the class of what I must be still permitted to call functional disorders.

For the study of cases of acute disease and of the graver forms of chronic disease adequate and admirable provision is made. But for the study of the slighter forms of chronic disease the provision made is inadequate, and for the study of that great variety of functional disorders growing with our advancing civilisation there is, beyond the necessarily incomplete instruction given in the out-patient department, substantially no provision made at all.[1] And yet, gentlemen, in carrying on your future work those cases of functional disorder are, probably, with few reserves, the most interesting, the most instructive, and the most important of all the cases with which you will have to deal. The study of those cases will make you familiar with the first results of the violations of physiological conditions and the earliest aspects of diseased states; they will make you familiar with them before temporary dynamical disturbances have drifted into permanent statical disease; and they will make you familiar with them when, as yet, the readjustment of diet and regimen, the judicious administration of drugs, and the regulation of all the little things of life which concur to make or unmake health, will enable you to restore the patient to health. Furthermore, cases of functional disorder and of the slighter forms of chronic disease will constitute the main body of the cases with which you will have to deal in practice; and your mastery of their forms and your skill in handling them will prove at once the measure of your usefulness and the criterion of your success. Among the functional disorders of which I am speaking there is one variety which in a special manner claims your closest study. It comprehends cases which abound in the present day, which are increasing with our advancing civilisation, which appear to arise out of irregular excitement of the nervous system, or out of neglect of the commoner conditions of healthy life, which are manifested mainly in an intense physical self-consciousness; cases which are the plague of families, profitable to the unprincipled quack, and perilous to every honest doctor. In this group of cases are the people who are always ailing and seldom ill; who, said to be sufferers from nervous debility, are yet capable of immense nervous work; who are not amenable to the curative effects of drugs; who are made worse by almost every remedy you propose; who often seek relief from stimulants and narcotics, who generally discredit your treatment, and who, nevertheless, when you fully understand their disorders and gain their confidence, are capable of being guided into that way of physiological righteousness which, despite their nervous troubles, leads them into useful, enjoyable, and worthy lives. I shall endeavour to bring cases of this sort before you; for even if the knowledge of them should not enable you to treat them successfully, it will enable you to escape discredit, and perhaps disaster, at their hands.

You will have already inferred from what I have said the mode of procedure which I purpose pursuing in the practical studies upon which we are about to enter. Nevertheless, for the sake of clearness and comprehension, it will be necessary to describe it in detail. But before I do this let me make plain to you the exact object which I have in view, that you may be neither disappointed with the nature of the instruction to be given nor dissatisfied with the limits within which it will be confined. Now my object is not the delivery of didactic lectures, not the reading of clinical essays, not the demonstration of technical proceedings, and not the discussion of rival pathological theories. All these procedures have their place and use. My one object now is to help you to get plain, practical clinical instruction, and so to get it of such a kind that you may pass from this hospital into practice accustomed to its methods and cautions, without fear of disaster, and ready for sound and honest work. At each meeting of our class, of which I expect all of you to become, in some way or another, coöperative members, my friend Dr. Hadley will present us a case for investigation, diagnosis, and treatment. Of the nature of this case we shall know nothing beforehand; and we shall proceed to deal with it in a manner resembling, as nearly as the widely differing conditions will permit, the manner in which you would deal with a like case in private practice. Of course the conditions in the two cases will be vastly different. There will be many persons present at the examination instead of one person, the tranquillity of the patient will be variously disturbed, we shall have to think and speak aloud, we shall have to discuss each other's procedures and conclusions, and teacher and taught alike may fall separately or conjointly into grave mistakes; but for all that the cardinal conditions of clinical work will be sufficiently alike to train you thoroughly, and initiate you successfully, into the practice of our art.

In dealing with each patient as he comes into the theatre it will be necessary to follow a definite plan of procedure. It may not be the best plan, and it may have many defects; but if uniformly acted upon and always employed as the standard of comparison and of judgment the results will be accurate enough for every purpose of our inquiry. In the first place, then, I shall ask the patient to tell us the symptoms of which he complains, how long he has been ill, and in what way his illness began. In the second place, I shall endeavour to learn from the patient the number and nature of the troubles from which he has suffered in the course of his life; for the continuity of organisms is one of the most instructive of teachers. In the third place, I shall make myself acquainted as closely and accurately as I am able with the medical history of the patient's family. In the disease of the parents we may sometimes read the diagnosis of an obscure disease in the child. Armed with information acquired from these sources, and assuming that the patient's statement points to the lungs as the chief seat of his malady, I shall proceed to investigate, with all modern aids to diagnosis, the condition of those organs. Completing this part of the examination I shall then inquire, through separate and successive investigations, into the conditions of the circulatory, digestive, genito-urinary, cutaneous, and nervous systems; and I shall ascertain the manner and degree in which the constitution is being affected by the disorders or diseases which we may have brought to light. At this stage of our investigation I shall be able to state in order the symptoms and signs of the patient's disease, and the signs and symptoms of disorder or of disease which may exist causally or independently elsewhere than in the lungs. I shall be able to elicit their relations, to interpret their meaning, and to set forth their bearing upon the future course and complications of the case. Now we shall be in a position to discuss the probable nature of the malady and to frame our diagnosis. This done, we shall consider the probable future of the case, settle the report to be made to the friends, and finally determine the treatment to be pursued. From time to time we shall re-examine the patient in order to correct or confirm our diagnosis, to determine the way in which the disease is going, and to consider the use or uselessness of our remedies.

Such, gentlemen, is the plan which, upon physiological lines, I intend to pursue in the conduct of these *clinical instructions;* and I feel myself justified in assuring you that if you adopt it in a spirit of serious endeavour, if you follow it step by step, if you pursue it unintermittingly, and if you bring all your collateral knowledge to bear upon its development, you will be preserved from confusion in emergencies, you will acquire a growing interest in your work, a precious habit will be formed in your mind, your whole nature will be lifted up, and in due season the fruits of your labour will be found abundant and good. Furthermore, the carrying on of your work in this manner will train your understandings, discipline your hearts, and exercise your wills to the utmost of their capacities; it will make you "cultivated men, it will enable you, on subjects of mutual concern, to hold your own with the public in the gate, and it will prepare you to deal successfully with those problems of the moral life from which few cases of disease are entirely exempt. Undoubtedly, my dear students, the fulfilment of these conditions will not be found easy. I am well aware, indeed, that it will be found tedious, disagreeable, difficult; and that it will exact self-denials always pressing, and efforts seldom slight. But then, I make the confident reply that it is only through the ready acceptance of these difficulties and sacrifices that you can acquire the strength necessary

[1] See Dr. Glover's admirable remarks on this subject, "Gaps in Medical Education."

for the work which you have hereafter to do. When the conditions of work and life become unencumbered and easy, failure is at hand and decay inevitable. It is a sacred and happy law which has made all good things difficult; it is only by the encountering and overcoming of difficulties that our mental and moral strength is developed and sustained; and it is only by the exercise and maintenance of this strength that we can reach and live that life of labour and of sacrifice which the doctor so often lives, and which moralists agree to regard as life indeed.

In conclusion, permit me to say a word or two on another but still closely related topic. I cannot pretend that anything has ever occurred to render necessary the speaking of these words to students of the London Hospital; and yet for many reasons, at this moment unnecessary and inconvenient to be specified, I may not leave them unspoken. The men and women who come into this theatre and submit themselves to be cross-questioned and in various ways examined before us have to pass through a considerable ordeal and to undergo some suffering. For they are our brethren; they have acute susceptibilities easily wounded; they feel deeply any slight or reflection which they imagine to be cast upon them; they are suspicious and ready to misinterpret; and any unfavourable judgment of their prospects of recovery, unwittingly expressed, fills them with apprehension and prevents their return for further examination. It is therefore necessary, and our duty, when patients are before us during examination, that all of us, you and I, should keep their presence in mind, and should abstain from any gesture or manner, from any look or word calculated to ruffle the temper or to wound the feelings of those who are voluntarily submitting themselves to both inconvenience and suffering for our common behoof.

An Address

ON THE

METHOD OF ZADIG IN MEDICINE,

Delivered at the Inaugural Meeting of the North London Medico-Chirurgical Society, on Thursday, Dec. 17th, 1891,

BY T. LAUDER BRUNTON, M.D., D.SC. EDIN., LL.D. (HON.) ABERD., F.R.C.P., F.R.S.

MR. PRESIDENT AND GENTLEMEN,—Allow me, first of all, to thank you for the great honour you have done me in asking me to address you to-night. The choice of a subject has not been easy, and, in trying to select one, it occurred to me that perhaps no animal gets to its goal more quickly or more surely than the carrier pigeon; yet, when started on its homeward journey, it does not fly directly onwards, but first of all takes two or three preliminary circles, in order to ascertain its whereabouts and the direction in which to direct its flight. The time spent in doing this is very far from lost, and what occurs in the case of the carrier pigeon appears to happen also in the conduct of human affairs. A little while ago I was down in the country, and a nurseryman, a most intelligent and able man, gave me a few lessons on pruning. He told me first of all what to avoid, and then what to do. "Some people," he said, "when they want to prune a tree begin with the knife at once, and cut here and there, without having a definite idea of what they are to do. Now the proper way is to put your hands in your pockets, stand a little distance off, look at your tree, see what you want to do, and then set to work." In laboratory researches we find the same thing, and a few preliminary experiments are often very advantageous in learning the methods of work, so that an apparent loss of time at the beginning is often a real saving both of time and trouble in the end. Now, as this is a new Society, it seemed to me that perhaps it might be better, instead of beginning with a definite medical subject, such as the pathology and treatment of some disease, to ask you rather to direct your thoughts to some general methods of investigation. Now one of the greatest losses in medicine is the loss of individual experience. We find that men most able and successful in the practice of their profession, in the recognition and treatment of disease, die and carry their knowledge away with them. Some men may record the cases they have seen, but comparatively few are able to record their experience in such a way as to make it thoroughly available for others. Various attempts have been made at different times to collect the experiences of medical men, especially those in general practice, and to put it in such a form as to be available for their colleagues.

In the years 1874–77,[1] in my capacity of editor of the *Practitioner*, I made an attempt to collect the experiences of practitioners by issuing a circular and asking for returns regarding the treatment of quinsy and sciatica. Answers were returned from all parts of the world, and these were collated and published. The advantage which was thus gained, however, seemed hardly enough to repay the time, trouble, and expense which these questions and returns necessitated, and the attempt was discontinued. A few years later another attempt was made on a very much larger scale by the Collective Investigation Committee of the British Medical Association, but after this had been continued for awhile it was also dropped. The same desire for the collection of information is shown, however, in the union of medical men to form societies in which everyone shall profit by the experience of his neighbour. The formation of the present Society is another indication of the value of this form of collective investigation, and it seems to me rather important that at its commencement we should pause a while and take a glance round before proceeding with what one may term its proper work, the consideration of diseases and their treatment. The failure of collective investigation to bring out any great amount of information from the profession as a whole shows that the task is no easy one; and if I fail to trace out for you a complete course by which our end may be attained you will not, I am sure, blame me, but will rather sympathise with my attempt, and will each and all of you endeavour to carry out further than I may be able to do the search for such methods as will enable us to attain the end we all desire. It seems to me that one cause of failure is a want of exact analysis, which leads to a want of exact synthesis. I may illustrate this by the common observation that, when we wish to describe the face of someone, all we are able to recollect, or at least to put into words, are the general facts that the individual has two eyes, a nose, and a mouth, with hair of a more or less pronounced colour. If we try to describe him more accurately, we may possibly recollect that his eyes are sleepy or bright, that his face is stout or thin, that his nose is long or short, that his chin is projecting or not. But here most of us would have exhausted our stock of reminiscences. Now, it is frequently very important that a face should be so exactly described that the owner of it may be at once recognised, and for this purpose a plan has been adopted in France of photographing the front face and the profile. The enormous number of photographs which are thus accumulated, of criminals and others in whom the officers of the law take an interest, is so great that it would be impossible either to pitch upon the particular photograph that was wanted or to recognise the individual if it were not for a system of arrangement. All profiles may be at once divided into three classes, according as the base line of the nose is ascending, horizontal, or drooping—and each of these may be further subdivided according as the bridge is convex, straight, or concave. When to these are added similar subdivisions, according to the shape of the eye and the ear, we see at once that the whole of the photographs may be readily classified, and any individual one that is wanted may be picked out from amongst thousands of others at a moment's notice. Many people remember faces sufficiently well to recognise them when they see them again, but not to describe them, much less draw a portrait from memory; yet it is by teaching the law officers to describe portraits from memory that they are trained to recognise from the photographs the people who may be "wanted." It appears to me that one of the kinds of training that is needed by medical men is this power of learning to differentiate the characteristics of a patient, the symptoms he presents, and the effects of treatment upon him in such a way as to render any case presenting similar features readily recognisable by a fellow practitioner. But it is not only the outward signs that we

[1] Practitioner, Nov. 1874, vol. xiii., p. 308; vol. xvi., p. 44; vol. xviii., p. 107.

have to differentiate in this way. We are obliged in medicine to judge of the unseen from the seen, and from the objective data which are presented to our senses we must draw conclusions regarding the processes which are going on, or have already gone on, in the persons of our patients. We must, in fact, track symptoms which we see back to their causes. Now this process of "tracking" appears to me to be a fundamental one in man, and one which seems really to be a remnant of the qualities possessed by our pre-historic ancestors. According to Haeckel, man runs through in his embryonic condition the history of the development of the race from a simple unicellular organism up to the human being. But even after birth traces of simian ancestry still appear. We have all noticed that when an infant is warming its feet before a fire the soles are not held straight forwards like those of an adult, but are turned in towards one another, and the great toes are drawn apart from the others in very much the same position as the feet of a monkey. Lately, too, Dr. Louis Robinson has shown that the arms of infants have an extraordinary power of supporting the weight of the body, and in this characteristic also an infant resembles the monkey. Even in adult life the position of the feet which we notice so easily in infants is retained by many, and we often find that the soles of people's boots are worn more on the outer than on the inner edge, the feet still tending to turn inwards, though only to a slight extent. The same tendency to reversion which we notice in the feet may be observed, I think, also in the faculties of the mind; and the keen interest in tracking game by which prehistoric man was enabled to exist still evidences itself in the intense eagerness with which boys will read in Cooper's novels about Indians in following a trail, or adults will pore over Gaboriau's stories of the police on the track of a criminal. There can be little doubt, I think, that the profession of medicine is a most intensely interesting one, and I am inclined to think that its special charm is, to some extent at least, due to the fact that it is constantly demanding the exercise of those qualities of tracking which we find in Cooper's Indian heroes. I know of no better example of the exercise of those faculties than that narrated by Voltaire in his story of Zadig. I thought it was an original idea of my own to point out the application of this method to medicine, but I find that I am only a humble follower of Professor Huxley, who has already written upon the applications of the method of Zadig to biology and palæontology.[2]

Zadig was a young man who, disgusted with life, retired from Babylon to a lonely place on the banks of the Euphrates, and there studied animals and plants until he saw a thousand differences where others could only see uniformity. One day one of the Queen's eunuchs, followed by a band of officials, came hastening past and asked Zadig: "Have you seen the Queen's dog?" Zadig modestly answered, "A bitch, I think; not a dog." "Quite right," said the eunuch; and Zadig continued, "A very small spaniel, has lately had puppies, limps with the left fore foot, and has very long ears." "You have seen her, then," said the eunuch. "No," said Zadig, "I have never seen her, and did not even know that the Queen had a dog at all." At the same time the finest horse in the King's stables ran away, and the chief huntsman, when seeking it, also made inquiries of Zadig, who said: "A first-rate galloper, five feet high, small hoofed, tail three feet and a half long, cheek-pieces of the bit are of twenty-three-carat gold and the shoes silver." "Where is he?" cried the chief huntsman. "I have not seen him and never heard of him before," said Zadig. Naturally enough he was suspected of having stolen both the spaniel and the horse, and was tried and condemned; but no sooner was sentence pronounced than both the missing animals were found. Zadig was then asked to explain how he knew so much about them without having seen them, and this, he said, was the way. He noticed one day in the sand the tracks of an animal, which he easily recognised as those of a small dog. Long faint streaks on the ridges of sand between the footprints indicated that it was a bitch with pendent dugs, showing that she had had puppies shortly before. Other marks on the surface of the sand close to the prints of the forefeet indicated that she had very long ears, and one of the footprints being fainter than the others showed that she was slightly lame. As for the horse, the marks of his hoofs were all equi-distant, showing that he was a famous galloper. In a narrow alley the dust on the trunks of the trees was disturbed at three feet and a half from the middle of the path. This showed the length of his tail, which had swept the trees as he lashed it from side to side. Branches of the trees met overhead at a height of five feet, and under them were some newly fallen leaves, showing that the horse had brushed against them, and was therefore five feet high. As to his bit, he had rubbed it against a stone, which Zadig recognised as a touchstone, and his shoes had left such marks on the pebbles of another kind as showed they were made of fine silver.

A story very like that of Zadig's is told of an old fakir in the Syrian desert. He was one day visited by several Arabs, who asked him whether he had seen their lost camel. "It was very tall," said the fakir, "it was blind of the right eye, it had lost one of its front teeth, and it was laden on the one side with honey and on the other with corn." "Yes," said the Arabs, "that is exactly the camel; you have mentioned every point about it. Where is it?" "I have never seen your camel," said the fakir. "But if you have not seen it," said the Arabs, "how can you know all about it?" "I knew that it was a very tall camel because the tracks of its steps in the sand were further apart than those of an ordinary-sized camel. I knew it was blind of the right eye because it had cropped the herbage only on its left side, and I knew that it had lost one of its front teeth because in the middle of every bite that it had taken there was a small uncut part corresponding to where the tooth ought to have been. I knew that it had been loaded with honey on the one side and with corn on the other because I saw flies buzzing round one side of the track and ants busy on the other carrying away grains of corn that had fallen from the load."

An admirable example of the application to medicine of this method of tracking used to be told with great gusto by my late friend, Dr. Milner Fothergill, and I regret greatly that I cannot tell it with the same power and vividness that he did. In the town of Leeds there once lived a quack who had received no professional instruction whatever, but was known far and wide for his wonderful cures, and especially for his power of diagnosing the diseases of patients whom he had never seen, by simply examining their urine. A celebrated surgeon, Mr. X——, wishing to see his method of working, desired to be presented one day, and the quack readily acceded to his request, feeling much flattered that so great a man should patronise him. Shortly after Mr. X—— had taken his seat a woman came in with a bottle of urine, which she handed to the quack. He looked at her, then at the bottle, held it up between him and the light, shook it, and said: "Your husband's?" "Yes, sir." "He is a good deal older than you." "Yes, sir." "He is a tailor?" "Yes, sir." "He lives at Scarcroft?" "Yes, sir." "His bowels are obstinate?" "Yes, sir." "Here," he said, handing her a box of pills, "tell him to take one of these pills every night for a week, and a big drink of cold water every morning, and he will soon be all right." No sooner had the woman gone out than Mr. X—— turned to the quack, curious to know how he had made out all this. "Well, you see," said the quack, "she was a young woman, and looked well and strong, and I guessed the water was not hers. As I saw she had a wedding ring on her finger, I knew she was married, and I thought the chances were it was her husband's water. If he had been about the same age as she it was hardly likely that he was going to be ill either, so I guessed he was older. I knew he was a tailor because the bottle was not stopped with a cork, but with a bit of paper rolled up and tied round with a thread in a way that no one but a tailor could have done it. Tailors get no exercise, and consequently they are all very apt to be constipated. I was quite sure that he would be no exception to the rule, and so I gave him opening pills." "But how did you know she came from Scarcroft?" "Oh, Mr. X——, have you lived so long in Leeds and you don't know the colour of Scarcroft clay? It was the first thing I saw on her boots the moment she came in."

Now, of late years we have got so many new methods of investigation that we are sometimes apt to forget the old habits of close observation by which this quack made out so much, and proved himself, although without any diploma, a worthy descendant of the water doctor whose picture by Gerard Dow occupies such a distinguished place in the gallery of the Louvre. Without resorting to the plan of

[2] On the Method of Zadig. Nineteenth Century, 1880. Reprinted in Science and Culture.

testing the urine, by which that water doctor and his brethren of the craft no doubt recognised the presence of sugar, he could learn a great deal from its simple appearance.

Some years ago, when staying in the country with a medical friend whose wife was boiling some eggs in the dining-room for breakfast, I said to her from the other side of the room, "You have cracked one of those eggs now." She said, "I don't think I have." On taking them out of the pan, however, she found that one of them was cracked. She wondered how I knew, but the explanation was simple enough. The pan had boiled over, the water would not have held the steam long enough to boil over, unless there had been something in it to make the bubbles tenacious, and this could hardly be anything else but albumen which had escaped from a crack. In the same way, although the water doctor did not know about albumen, he probably recognised that the persistence of froth on the urine after shaking it was of somewhat ominous import, and that would lead him to give a guarded prognosis, just as one nowadays sometimes pities an old gentleman who unconsciously proclaims his precarious tenure of life by the froth he leaves behind him in the public urinal.

The water doctor may even have learned to associate this frothiness with nervous symptoms, such as restlessness, irritability of temper, and sudden outbursts of passion quite out of proportion to the amount of offence. I well remember an incident some fifteen years ago where an apparently causeless outburst of fury on the part of an ordinarily quiet man completely astonished all his friends, who only understood it when his subsequent illness and death showed that his sudden passion was but an indication of unsuspected disease. The steward of St. Bartholomew's Hospital, Mr. Mark Morris, a man of very keen observation, has told me that whenever a patient comes down to the office at 11 o'clock at night and wants to be discharged there and then, they know that he is suffering from cardiac disease. Perhaps the outburst of fury in the Emperor Theodosius,[2] which resulted in the massacre of Thessalonica, was only an indication of the disease which later on resulted in dropsy and death. The water doctor would be sure to divide his frothy urines into pale and dark, and he would know that these two corresponded to quite different types. The dark urine was probably passed by an individual who was short of breath, disposed to rest, and frequently drowsy. The pale urine would be passed either by an individual who rose in the morning with his eyelids swollen and puffy, and who was probably drooping and languid during the day, or by a person of quite a different stamp, energetic, irritable, restless, sleepless, always on the move, and driving on like a high-pressure engine. Further than that, perhaps, the water doctor might not go, but we know now that the dark, frothy urine has probably been passed by a man suffering from cardiac disease, while the pale urine is due to renal mischief; and the classical researches of Bright and others have shown us that the man with big eyelids has probably tubular nephritis, while one who drives himself and his neighbours without intermission suffers from contracting kidney. Nay more, physiological and pathological researches have taught us that the dark urine of cardiac disease is due to low tension in the arterial system in general and in the renal arteries in particular, so that the excretion of water is diminished, while the pale urine is due either to high tension in the arterial system, as in cases of gouty kidney, or to diminished power of excreting solids in chronic nephritis.

But there are other indications of disease which may sometimes be recognised without examining the urine, and I was greatly astonished by a man diagnosing albuminuria from the photograph of a patient, although there was no swelling whatever visible in the face. On inquiry afterwards I learned that the diagnosis was made from the glistening of the eye. A tendency to œdema had caused reflection of light along the sclerotic, and this caused the eye to appear more brilliant than usual. A similar glistening of the eye we get as an effect of the emotion of compassion, in which the increased secretion of tears moistens the eyeball more than usual. An entirely different effect is produced by the emotion of anger, where the eye does not glisten, but glitters, or by great grief, which renders the eyeball dull and lustreless. If we try to follow these appearances back to their physiological cause, we may find our attempt helped by considering a typical lack-lustre eye, such as that of a dead cod-fish. We see at once that the eyeball here is flaccid and its surface perhaps indented, instead of being tense, as it ought to be, and its surface smooth. We may imitate this condition very readily upon a child's indiarubber balloon. If we let the air out it at once becomes limp. If we blow it out it begins to shine, and the tighter we blow it the more does it reflect the light. The tension in the eyeball under ordinary conditions has a relation to the tension of the blood, and the bright eye indicates the stout heart which may win the fair lady, while the lack-lustre eye is associated with a feeble circulation, which frequently has its origin in the depressing emotions of sorrow or fear. The glittering which occurs in anger is, I think, part of the same physiological process by which the face in great anger becomes pale, and the blood becomes concentrated internally, ready to supply force to the muscles in a sudden attack upon the enemy. It has always seemed to me that Orchardson's wonderful picture of Voltaire complaining of the insult that had been offered to him would have been rendered still finer by a very minute touch of white upon the eyeball, to indicate the glitter of anger. The bright eye of consumption is familiar to us all, the high temperature so common in the disease tending to make the circulation more than usually rapid, the intellect often more keen, and the hopes more bright than in health, though the face may be emaciated and the body reduced almost to a skeleton. But if we find in a thin person a languid instead of a bright eye, we are led to look for the cause of the patient's leanness rather in want of food than in rapid combustion, and not unfrequently, if inquiry teaches us that the patient is able to obtain food, we may diagnose either that he cannot eat or cannot digest.

Now it does not do to make one's diagnosis too rapidly, for otherwise one may fall into grievous error. I remember once a whole class of students standing round a man with a loud cardiac murmur, and one of his pupils much dilated. After many learned opinions had been expressed regarding his case, the man informed us that the eye over which we had been having such an animated discussion was a glass one. A similar occurrence happened to a learned professor. He was telling his students that he was able to discover this, that, and the other thing from the appearance of his patient's teeth. The woman took them out, and said, "Please, sir, I will hand them round; they might like to look at them closer." Yet, in spite of these risks incidental to all hasty observation, the habit of close attention to minute detail which this professor tried to inculcate was a most useful one, and many of those who scoffed at him five-and-twenty years ago have learned to respect and admire him. The process of tracking disease to its cause will often help us greatly in treatment, for unless we can remove the cause all therapeutic measures may be useless. I remember on one occasion being consulted by a gentleman who was second in command in a department involving not only heavy work, but great worry. He was suffering from dyspepsia, and looked thin and worn. I examined him most carefully, and could find absolutely no cause for his symptoms. Knowing, however, the conditions under which he was working, I said to him, "How is your chief?" "He is not well." "Is he irritable?" "Yes, very." "Who is physicking him?" "Dr. So-and-so." I returned him his fee, and said, "Go to Dr. So-and-so and tell him to physic your chief; it is of no use for me to try to cure you with medicine." I met my patient some time afterwards, who, with a sly glance at his chief, whispered to me, "Your prescription was very efficacious."

One of the best examples that I know of tracing symptoms to their cause is afforded by Weir Mitchell's observations on chorea and on neuralgic pains. During the American War he took great interest in cases of gunshot wounds, and especially those involving injury to nerves. After the war was over his patients were scattered far and wide over the continent of America. He was struck by the curious coincidence in the reports which he got from them, and observed that one day (to put it roughly) he might get letters from San Francisco, saying that his patients in that district were suffering from pains in their scars; next day he might get a packet from the neighbourhood of Denver, next day from Chicago, and next day from New York. He thus noticed that a wave of pain was passing across the country. He next obtained the meteorological records, and found that a wave of rain was passing across the country at the same

[2] Gibbon's Decline and Fall of the Roman Empire, chap. xxvii.

time and with the same speed. By comparing the pain-area with the rain-area he noticed that the two were concentric, but that the pain-area had a much larger radius than the rain-area. Thus all the patients in the rain-area, when they felt twinges in their limbs, looking up at the sky, would say, "It is raining to-day, and that is the cause of my pains." But those in the part of the pain-area outside the rain-area, when they looked up, saw that the weather was fine, and could thus discover no cause for their sufferings, although these were due to meteorological disturbances just as much as those of their fellow-sufferers in the rain-area. The way in which Weir Mitchell showed the dependence of chorea on meteorological changes was almost as interesting as the relationship between pain and weather. He tabulated all the cases of chorea occurring in Philadelphia, and drew out a chart to show them diagrammatically. He then got the meteorological records and tried to find what conditions caused an increase in the cases of chorea. He tried the mean daily range of the thermometer, the average temperature, the average barometric pressure, the relative humidity of the air, but little or no correspondence could be traced between the curves representing these different factors and the curve of chorea. The curve showing the amount of rain and snow in inches showed a slight general resemblance to that of chorea, the curve showing the days on which the rain or snow fell came still nearer, but the curve showing the number of storm centres passing within 400 miles of Philadelphia showed a likeness to the curve of chorea which was very remarkable. In the same way he showed that the curve of infantile palsy closely corresponded with the curve of temperature, though not precisely so. We now constantly receive from America telegraphic information of the approach of storms, and we may well fancy that the day is not far distant when warnings will be published in the newspapers, not only to seamen of approaching storms, but to invalids and people in general of the meteorological changes which will induce pain in some and nervous excitability in others, with perhaps an added hint that extra flannel should be worn by the former, and bromide of potassium or some other nervine sedative taken freely by the latter.

One of the commonest observations in medicine is that cases come in a run. In hospital practice this is very striking. On one day you will see a great number of cases of bronchitis, another day cases of diarrhœa, another day cases of rheumatism, and so on. It has seemed to me, for a good many years back, that a most useful study would be the connexion between such runs of cases of disease and meteorological conditions. I may, perhaps, be allowed to suggest that such a society as the present might find this a useful branch of work, and one which would not entail a great deal of labour if it were properly done. Each week, or each fortnight perhaps, the members might jot down in one word the kind of cases of which they had seen most, and their individual notes might be classified, so as to give the general results, by some member chosen for the purpose. He would then be able readily to get the meteorological records, and by comparing these with the cases which had come in a run the relationship might be traced between the condition of the weather and the class of patients most affected. We are accustomed to warn patients suffering from pulmonary diseases, either phthisis or bronchitis, or from albuminuria, to avoid chills; but I do not think that the meteorological factors which give rise to exacerbation of symptoms in all these diseases have been at all satisfactorily determined as yet. The process of tracking might thus be advantageously followed, in regard to the external conditions giving rise to disease, by this Society, but the process ought not to end here; it ought to be followed onwards to the internal constitution of the patient. You will often hear people who do not believe much in doctors still say that they are unwilling to go to anyone else than the man who has attended them and their families for a long time, "because," they say, "he knows my constitution." If we try to analyse what they mean by this, I think we will find that "the constitution" implies the kind of reaction which occurs on the application of any external stimulus. Take three men belonging to different families, for example. Put them on the top of an omnibus and let them drive out on a rainy day, and with a cold wind blowing. One man comes home and has a bad bronchitis, the second an attack of sickness and diarrhœa, and the third gets an attack of rheumatic pains. The meteorological conditions to which each man has been exposed were the same, but the results have been quite different, the difference depending upon the constitutions of the individuals. But people belonging to different families do not only react differently to meteorological conditions or to other causes of disease, they are also differently affected by remedies. One of these three men, for example, might tolerate with impunity, and indeed derive benefit from, large doses of arsenic which would cause sickness and diarrhœa in another; while a second might get headache, deafness, and possibly a cutaneous rash from a quantity of quinine which would only produce a feeling of strength and well-being in another. It is the knowledge of the way in which different families will react to drugs that constitutes the most important part of the experience of an old practitioner, and which forms one of the greatest difficulties in the way of a medical man treating strangers satisfactorily and certainly. When a stranger comes before him presenting certain symptoms, he can only deal with the disease according to average rules, and yet this individual patient may present the exception to these rules, and consequently the treatment fails.

But it is not only in different families that we find drugs having a different action; different individuals in the same family will not react always in the same way, either to the cause of disease or to the mode of treatment. Nay more, a further complexity is introduced by the fact that the same person will react differently in youth, manhood, and age to causes of disease and to remedies. We not infrequently find, for example, that a youth who has been liable to bronchitis presents symptoms of dyspepsia in middle age, and may again have a pulmonary affection in old age. If these variations in families and individuals could be traced to their origin the benefit conferred on practical medicine would be immense. We should then be able to overcome satisfactorily one of the great difficulties which constantly meet us at the present time, and instead of simply *trying* our remedies, choosing first one and then another amongst those most likely to suit, we should then be able to select the drug most suited to any individual case with certainty, and treat the disease with success. In this attempt I think we may be greatly helped by the law of heredity. At present we acknowledge it to a certain extent. If a man's grandfather has been gouty we are not at all astonished at the reappearance of the gouty symptoms in the grandchild. If either the father or the mother has been consumptive we dread the same disease in their progeny; but if one child should resemble the consumptive mother and the other the hale and hearty father, we should use special care to guard against colds in the former, and have very much less fear of any tubercular tendency in the latter. We acknowledge, in fact, that the members of one family throw back to different ancestral strains either on the father's or the mother's side, and that they do this not only in external appearance, but in tendencies to disease, and this is still one of the points which wants close and careful investigation. The different tendencies of an individual in either childhood or age may be regarded as a kind of reversion to different ancestors at various periods of life. This has been beautifully put by Oliver Wendell Holmes in his novel "The Guardian Angel." The heroine of this story, Myrtle Hazard, runs away from home, and, floating down the river in a boat, sees at dusk, in an old Indian burying place, a curious vision. Around the burial mound various figures seem to flit, some thin and shadowy, others more substantial, but still misty; while others again appear almost as distinct as living men and women. She recognises, as one does in a dream, that these are her ancestors, the solid ones closely related to her in blood, while the thin and shadowy are far removed. Each ancestor has an existence in herself more or less definite according to the nearness or remoteness of blood. It is not necessary to trace our heroine through her various adventures; but at one time she develops suddenly and unexpectedly, under provocation, the characters of an Indian squaw from whom she is descended, and nearly slays a schoolfellow while they are acting together. Later on another ancestress, who was a famous beauty, appears in a dream, and for some time afterwards the heroine feels this beauty living within her and directing her actions; while later still another ancestress, who has been a great saint, drives the capricious beauty out and leads the heroine in the way she should go.

As I have already said, Haeckel believes that during intra-uterine life the fœtus rapidly runs through the

development of the race up to mankind, and I think we may in after life trace the progress of the individual through various ancestors more and more slowly as he advances in years. In infancy and childhood we frequently notice how rapidly the features change, and friends will say at one visit how like the child is to some member of his father's family, while a week or two after they will notice a resemblance to someone of his mother's family. If this Society can gather together notes as to whether an individual presenting an unwonted reaction to medicine happens to resemble at the time someone either of his father's or his mother's family who had a similar peculiarity, a great step might be made. This, however, is not all. We have next to try to trace why medicines act differently upon different families. It is just possible that this also is a case of reversion to a very far-off period; indeed, before mankind had even reached the level of the monkey. Some years ago it occurred to me that one might possibly gain some information regarding the peculiar differences in the action of drugs on gouty and other individuals by comparing the effects of certain poisons or remedies upon such animals as rabbits, which excrete their nitrogenous waste in the form of urea, and pigeons, which excrete it in the form of solid urates. Now Weir Mitchell had shown that pigeons had a singular power of resistance to the action of opium, and can take large quantities of it without presenting any symptoms of narcosis. Dr. Cash and I made some experiments upon the subject, and we found that opium in moderate doses appeared to have almost no action upon pigeons, yet on examining more closely we found that it had a very marked action, only it did not produce sopor, but caused the temperature to fall greatly. Instead of acting as a narcotic it acted as an antipyretic. We did not try the converse of this by giving antipyretics such as antipyrin to pigeons and seeing whether they acted as soporifics, but in patients we certainly do find that occasionally, as in acute inflammation, opium seems to have an antipyretic action, whereas antipyrin certainly acts at other times like a soporific. In order to track these actions further back still and find out what changes in the circulation, blood, nerve cells, and nerve fibres the action of these various drugs depends, a large amount of experimental work in laboratories is required.

Until lately there has been no opportunity for young men generally to do such work in this country, and those who wished to undertake it were obliged to go abroad. Now, however, owing to the wise action of the Colleges of Physicians and Surgeons, opportunities are being afforded for such investigations; but all such researches will give only one side of the subject, and will remain valueless unless clinical observation can be brought to bear at the same time on therapeutic studies. The members of this Society, by the fact that they have founded it, have shown their desire to forward the progress of medicine. I have to-night tried, in a very imperfect way indeed, to consider some of the methods by which I have thought their objects might be to some extent attained; and even if I should have failed to show you how to work, this evening may not have been uselessly spent if I have succeeded in directing your attention to the search after methods of attaining the objects which we all have at heart—that of securing health and ease to our patients with quickness and certainty.

AN INFECTIOUS DISEASE HOSPITAL FOR ST. ALBANS.—At a recent special meeting of the St. Albans City Council, it was announced that Mr. J. Blundell Maple, M.P., was willing to erect, on a site already selected, a hospital for infectious diseases, to be called the "Sisters' Hospital," at an expense of £6000, to be presented to the St. Albans Corporation on behalf of the city and neighbourhood. Mr. Maple has also promised to present a recreation ground and people's park to the city.

AYR COUNTY HOSPITAL.—The utility of this institution has been again exemplified by the extended area of the benefits it has bestowed during the past year. The hospital has been more taken advantage of than in any previous year of its existence, the marked feature being a greater number of cases from outlying districts. The total ordinary income and expenditure respectively during the year were £1728 1*s.* 8*d.* and £2169 4*s.* 4*d.*, showing a deficiency of £441 2*s.* 8*d.* The endowment fund now amounts to £5922 13*s.* 7*d.*

Clinical Lectures
ON
STRICTURE OF THE ŒSOPHAGUS,
WITH FOURTEEN ILLUSTRATIVE CASES, IN FOUR OF WHICH GASTROSTOMY WAS SUCCESSFULLY PERFORMED.[1]

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LECTURE I.

GENTLEMEN,—Since the beginning of the present session you have had brought under your notice an unusually large number of cases illustrative of the class of disease which will occupy our attention in this and the succeeding two lectures. Diseases of the œsophagus leading to more or less complete stricture are not as a rule met with in considerable numbers even in our large hospitals, therefore it is the more remarkable that during the last three months you have seen so many cases in which the patients suffered from marked dysphagia as a consequence of disease of the gullet, or from pressure upon that canal. Most of these cases were sent to me by their medical attendants, while others came to the out-door department of their own accord, and simply complained of difficulty in swallowing, together with weakness, as a result of inability to take a proper amount of nourishment. In all the cases brought before you the most prominent symptom was difficulty or impossibility of swallowing food.

When we were studying the general symptomatology of diseases of the throat, your attention was directed to various conditions which may manifest themselves by difficulty or even impossibility in swallowing food. Hence various terms are employed to designate the character or degree of obstruction to the passage of food. When swallowing is painful, the patient is said to be suffering from odynphagia, as, for example, in inflammation of the œsophagus resulting from the action of corrosive agents. On the other hand, when the lesion is of a chronic character, such as cicatricial stricture or the pressure of tumours upon the gullet, the patient may suffer comparatively little pain, while the obstruction to swallowing is great. To this condition the term dysphagia is applied. Again, should the obstruction be complete, as in Cases 3, 4, and 7, the patient is said to be suffering from aphagia. Besides stricture of the gullet properly so called, the lesions which give rise to œsophageal dysphagia are numerous and varied; but as most of them will require to be referred to when we come to consider the question of diagnosis, I will simply enumerate them at present. Congenital malformations and the impaction of foreign bodies in the gullet very seldom give rise to much difficulty in diagnosis, but it is otherwise in those cases of aneurysm of the aorta, mediastinal tumour, enlarged lymphatic glands, exostosis or curvature of the spine, which, by pressure upon, or by causing distortion of, the œsophagus, may lead to serious difficulty in swallowing. The cases of aneurysm of the transverse arch of the aorta causing pressure on the gullet at the level of the bifurcation of the trachea are perhaps the most important.

Using the term "stricture of the œsophagus" in its proper sense, it may be divided into four varieties—viz., malignant stricture, obstruction by benign tumours, organic stricture, and spasmodic stricture. We will now consider these diseases in detail, and afterwards discuss the questions of prognosis and treatment. Two forms of malignant disease attack the œsophagus—the carcinomata, which are very common and usually occur as primary lesions, and the sarcomata, which are rarely met with in the gullet unless as secondary to sarcomatous formations in other parts. Carcinoma is by far the most important and also the most common new formation met with in the gullet; and it appears that any part of the tube may

[1] Selected from a course of lectures delivered during the winter session 1890-91 at the Royal Infirmary, Glasgow.

be attacked, although there are certain points which are more liable to the disease than others. Taking, for example, the seven cases of cancer of the œsophagus which have come under our notice this session, it was observed that in two the tumour occupied that portion of the œsophagus situated behind the larynx; in other two the stricture was found to be on a level with the bifurcation of the trachea, while in three the cancerous growth attacked the gullet at its lower extremity. There is considerable difference of opinion as to the most common situation of the primary disease. Some observers assert that the lower third is the most frequent seat,[2] while Mackenzie[3] and others assign 44 per cent. of cases to the upper third, and say that only 22 per cent. occupy the lower third.

As far as my own experience goes, it appears that the most common spot to find the primary growth, at least as far as can be discovered during life, is immediately behind the cricoid cartilage, and that the next point most liable to attack is at the level of the bifurcation of the trachea. Statistics derived from the inspection of pathological reports do not afford very reliable data; because in such instances the disease is not observed at its onset, but after it has terminated the life of the individual and extended far beyond its primary focus. Even in cases examined during the early stage of the disease it is difficult to ascertain the precise limits of the lesion; all we can learn is the highest point of obstruction, unless in those rare cases in which the œsophagoscope may be employed. From a clinical point of view, the most important fact is that carcinoma of the œsophagus very frequently is situated, and may cause obstruction, at the level of the bifurcation of the trachea—namely, at a part where the gullet is likely to be pressed upon by a mediastinal tumour, or by an aneurysm of the arch of the aorta. As a matter of interest, I have contrasted a number of tables drawn up to prove the part most liable to attack; but the discrepancy between them is so remarkable that the value of individual tables is by no means high. For practical purposes we must, however, consider carcinomatous disease in reference to the situation of the tumour. When situated high up and of small size, the tumour possibly may be removed by œsophagectomy, or œsophagostomy may be performed, while if large in size the neoplasm may cause obstruction to respiration and demand tracheotomy. Again, when the tumour is situated at the bifurcation of the trachea, great care must be taken in the employment of bougies, on account of the danger of causing injury to the trachea or aorta, and at the same time, before adopting any line of treatment, the possibility of the obstruction being due to an aneurysm must be eliminated.

We now come to consider the etiology of carcinoma of the gullet. We know just as much and as little regarding the causation of tumours in this situation as in other parts of the body. The two important predisposing causes are sex and age; we will leave out of account the question of heredity. Some observers, however, attach considerable importance to heredity as a cause of malignant disease, but to my mind the influence of inheritance in the production of malignant disease has not been proved, as it has been, for example, in such diseases as hæmophilia, Daltonism, and diabetes insipidus.

Age is a most important factor. Of 510 recorded cases, the ages of which I have ascertained, 80 per cent. were between the ages of forty and seventy years, 12 per cent. were below forty, and 8 per cent. above seventy. Again, on examining more carefully into those between the ages of forty and seventy, nearly a half (or 40 per cent. of the 510 cases) were found to be between forty-five and fifty-five years of age. In considering the influence of age it must always be remembered that each decennial period does not contain the same number of individuals; so that, to be quite accurate in our calculation, it would be necessary to estimate the percentages with the fact in view that each decennium as it advances contains fewer individuals.

Another circumstance which must have attracted your attention is that out of the seven cases shown to you only one was a woman. One in seven is, however, a little below the general average. Of the 510 cases referred to already, 103 were women and 407 were men, and of all the cases which have come under my own observation only 10 per cent. were women. For practical purposes it may be said that four fifths of the cases of cancer of the œsophagus occur in males. In this particular epithelioma of the œsophagus resembles the same disease as it attacks the lip, the tongue, the larynx, and the rectum. But while these parts are more liable to be attacked by malignant disease in men, in women disease of the sexual organs is disproportionately frequent. No reasonable explanation has yet been offered for this peculiarity, and it remains as one of the many facts in regard to the etiology of cancer of which we know little.

Regarding the exciting causes of cancer of the œsophagus there is only one point worthy of attention—namely, that protracted slight irritation is likely to determine the site of the primary growth. This point has been well illustrated by cases shown, in which the points of selection were—(1) The upper part of the œsophagus, where the tube becomes suddenly narrowed behind the cricoid cartilage, and where during deglutition the bolus of food is moulded into form to pass down the gullet; (2) at the point where the œsophagus passes behind the bifurcation of the trachea; and (3) where it penetrates the diaphragm, in all of which situations there is more likely to be obstruction to the passage of large morsels of food. Again, it has been observed that epithelioma of the œsophagus may follow upon simple stenosis, or upon an old cicatrix, just as we may have malignant disease planted on an old syphilitic cicatrix on the tongue, or a burn of the skin.

In many of the cases which have come under my notice the patients have told me that for a considerable time, sometimes for years, before they experienced any difficulty in swallowing, they were troubled with "indigestion and acidity," and had been falling off in general health. In instances where these symptoms existed for only weeks or months, the possibility is that the malignant disease was present from the onset, but when symptoms of gastric and œsophageal irritation have been present for years previous to any definite obstruction to swallowing, one cannot but seek an etiological relationship between the chronic inflammatory lesion and the carcinomatous growth. Is it likely that the tumour in this case, as in the more acute cases, existed from the beginning of the illness?

Passing now to the consideration of the pathology of the carcinomata of the œsophagus, we have already seen that there are certain points of selection; but while this is so any part of the tube may be attacked. When the disease is, as is usually the case, a squamous-celled epithelioma, the histological structure and mode of growth closely resemble cancer of the lip or of the larynx. A small raised, warty, or nodular tumour appears. The proliferation of cells probably takes place, in the first instance, in the deeper layers of the mucous membrane, but very soon the basement membrane is perforated and the actively increasing epithelial elements infiltrate the underlying connective tissue. The tumour may remain isolated, but as a rule it assumes an annular appearance, and soon forms a distinct obstruction to swallowing. The disease may further extend into the muscular coat, and afterwards into the adjacent parts. The central or more prominent parts of the growth may now ulcerate, and, as a consequence, at this stage the impediment to swallowing may be somewhat relieved. If death occurs at this period a deep ulcerated ring will be seen to be overlapped by the elevated edges of the upper and lower portions of the tumour. In most instances the obstruction is not entirely due to the space occupied by the tumour proper, but is increased by inflammatory induration of the connective tissue. This inflammatory new formation, together with the granulation tissue of the ulcer, contracts as the disease advances; so that while the epithelioma is being destroyed by a destructive process the calibre of the gullet is soon after reduced by the contraction of cicatricial tissue. It is therefore commonly observed that, during a certain period in the course of the disease, marked improvement may occur in swallowing (as in Cases 4 and 7), while later on dysphagia becomes more marked than at any previous time.

When examined microscopically, the squamous-celled epithelioma is usually found to be of the infiltrating form. The epithelium is seen to infiltrate and destroy the submucous connective tissue by sending long processes and laminated capsules into the underlying tissue. These capsules are very characteristic of this form of epithelioma. In the aggregated form the cells take, on section, the appearance of globes, but individually they are arranged in a concentric form, like the coats of an onion. The growth is usually softer, and the connective tissue more abundant,

[2] Coats' Pathology, p. 713, and Petri, Berlin, 1868.
[3] Diseases of the Œsophagus, p. 88.

than is observed in epithelioma of the lip or of the skin. But while the squamous-celled carcinoma is the most common growth in the gullet, other varieties of cancer are met with.

CASE 1.—For example, three years ago a patient who was under my care died from starvation, with the most marked and complete obstruction at the lower end of the œsophagus, and at the post-mortem examination a tumour was found occupying the lower three inches. The new growth uniformly infiltrated the œsophageal wall, and both its lower and upper extremities were abrupt, and the parts below the cardiac orifice were free from disease, while the mucous membrane of the gullet above the tumour was the seat of only slight inflammatory changes. There was no ulceration at any part. On transverse section the tumour was seen to occupy the whole thickness of the wall, and measured from the mucous to the outermost limit about half an inch. The lumen of the tube was so reduced that even after death it would only admit a No. 3 urethral bougie. On microscopical examination the tumour was proved to be a cylindrical-celled epithelioma, or adeno-carcinoma, similar to what is usually met with in the rectum. It presented a distinctly glandular appearance in some parts; while in others, as a consequence of active cell multiplication, the adenoid structure was not strictly preserved, and the cylindrical form of the cells was lost, except perhaps in those forming the layer next the stroma. These aggregations of epithelial cells were of considerable size, and were separated from one another by a coarse alveolar stroma, partly composed of newly formed connective tissue and partly of dissected involuntary muscular fibres. This growth closely resembled in its structure and history the destructive adenoma of the stomach, large and small intestine, and rectum. These neoplasms start in the mucosa, but soon invade the deeper layers, and are accompanied by an inflammatory connective tissue proliferation, together with the development of a large number of neoplastic tubules. These first invade the submucosa, but very soon thereafter they extend, ultimately dissect their way between the muscular bundles, and may even extend to the serous covering of the alimentary canal. In the case now under consideration the patient was starved before the growth had time to extend into the neighbouring tissues or give rise to metastasis.

Mr. H. T. Butlin,[4] in his admirable monograph on Sarcoma and Carcinoma, refers to three cases of hard cancer or scirrhus of the gullet. He says: "The hard cancers are said to have presented a well-marked alveolar structure, and in one of them the mucous glands were thought to be the point of departure of the disease. The duration of the third case is not known, for the patient was too weak to communicate the hisory of his iliness during the two days he was an inmate of the hospital before his death; but the duration in each of the first two cases was much longer than in the most prolonged of the cases of epithelioma. Even at the end of two years the second case does not seem to have completed its course, for neither the glands nor any of the organs were the seat of secondary growths. And in the first case, although the disease was believed, on what appeared to be sufficient grounds, to have existed for upwards of three years, only a few small nodules were found in the lungs and one small tumour in the liver, while the condition of the glands is not recorded." Three years ago I saw the last of a case very similar to the one just quoted.

CASE 2.—This patient, a man aged fifty-nine, consulted me for the first time on Nov. 1st, 1886—that is to say, about two years previous to his death, and nearly three years after the onset of the first symptoms of stricture. In other words, without the aid of an operation, the patient lived for five years with a scirrhous cancer of the œsophagus. The first symptom was difficulty in swallowing, which was observed by the patient in January, 1884. At first the dysphagia was so slight and transitory that he thought little of it, and he did not consult a medical man till November of the same year. At that time a No. 11 bougie could be passed, after which the patient experienced some relief, and he did not complain of pain, nor at any time was blood observed in the vomited matter, or in the expectoration. He could swallow fluids and semi-fluid food with ease, but frequently he had difficulty in taking such articles of diet as bread, potatoes, and meat. In the interval between Nov., 1884, and January, 1886, so far as I could learn, the symptoms, although varying in degree slightly from time to time, remained practically the same at the latter as at the former date. Indeed he felt himself, during the early months of 1886, that he was swallowing more easily; at the same time his strength and weight improved, and a No. 15 bougie could be passed with ease. This favourable condition continued till July, when gradually but steadily the stricture became more severe, and when, in November, 1886, he consulted me, I could with difficulty pass a No. 7 bougie, and the patient was considerably emaciated. The following table of weights in pounds is very interesting, and can be relied upon:—

	1883.	1884.	1885.	1886.	1887.	1888.
January ...	—	151	144	141	132	118
March ...	—	153	142	145	134	112
May ...	156	150	142	145	127	101
July ...	—	145	140	137	128	—
September.	158	143	142	136	125	—
November.	—	143	140	132	121	—

Taking the years from May, 1883, it will be seen that during the first he lost only 6 lb., the second 8 lb., the third gained 3 lb., the fourth lost 18 lb., and in the fifth year 26 lb.; in all the loss was 55 lb. This slow development of the stricture and very gradual loss in weight is in marked contrast to what is seen in other forms of cancer; and even although the case extended over such a long period, the patient did not die from starvation, but as a consequence of secondary formations in the lung. The tumour occupied the lower fourth of the œsophagus, was almost as hard as cartilage, and both in the bronchial glands and in the liver small hard secondary formations were discovered. The nodules at the root of the lung had caused constriction of the bronchi, and very extensive and marked passive pulmonary hyperæmia. We have under observation at present a man (Case 6) whom I believe to be suffering from the disease under consideration.

Soft cancer or acute carcinoma is said to be very rarely seen in any part of the œsophagus, so that the following cases are of special interest. Only one case of acute carcinoma has come under my own notice. But to show you that acute carcinoma is met with in the gullet, I refer you to a case published in the *Glasgow Medical Journal* by Dr. John Fox.[5] I will not occupy your time by referring to the clinical history of the case, but the following is the account of the post-mortem inspection. On examination after death there was found in the middle of the œsophagus a pretty firm mass, about an inch and a half long, and almost completely closing up the passage. The œsophagus, at the part occupied by the tumour, was firmly connected with the structures at the arch of the aorta, but no ulceration of these parts had occurred. The glands at the cardiac end of the lesser curvature of the stomach were enlarged and indurated. The stomach and other organs seemed free of disease. Microscopic examination of the tumour in this case was made by Dr. Joseph Coats, and he writes "that the structure of the tumour presents the characters of medullary cancer, and not of the epithelial form, which is much more usual in the œsophagus. The glands from the neighbourhood of the stomach also present similar microscopic characters." Dr. Joseph Coats informs me that in the Western Infirmary museum he has three specimens of acute carcinoma of the œsophagus, and the patient H. C—— (Case 9), to whom I shall refer hereafter, is also suffering from this disease.

Colloid cancer may attack the œsophagus, but as a rule degenerative changes are seldom observed in malignant growths in this situation. Death of the patient from starvation usually occurs so early after the onset of the disease that little time is permitted for such retrograde metamorphosis to take place. Dr. Bristowe,[6] however, reports one case in which the characteristic appearance of colloid cancer was shown in an instance in which the tumour invaded the lower part of the gullet and the cardiac end of the stomach, as well as formed secondary formations in the lungs and lymphatic glands. The report of the Morbid Growths Committee shows that the tumour presented the "ordinary features of colloid disease, and under the microscope the characteristic alveolar structure was observed."

In considering the diagnosis of carcinomatous disease of the gullet three points require to be considered together—(1) Is there a carcinoma in the gullet? (2) What is its situation? (3) What is its nature? These questions cannot well be discussed separately, for not only do the symptoms depend upon the precise nature of the tumour, but perhaps

[4] Pp. 178 and 187

[5] Vol. iv., New Series, p. 402.

[6] Trans. Path. Soc., London, vol. xix., pages 228 and 236

even more upon its situation. In respect to situation I will therefore divide the cases which have been brought before you into three classes—(1) those in which the tumour occupied the upper part of the œsophagus; (2) cases where the growth developed at the bifurcation of the trachea; and (3) those instances in which the neoplasm was situated at the lower end of the gullet. Each of these classes may show a different history, and may present special points for consideration.

CASE 3. *Epithelioma (?) of œsophagus at the level of the lower edge of cricoid cartilage; history of steadily increasing dysphagia during two months, terminating in complete obstruction.*[7]—W. F——, aged fifty, a labourer, was admitted into the Glasgow Royal Infirmary on Nov. 3rd, 1890, complaining of complete inability to swallow any food. The only substance which he could take by the mouth was very small quantities of brandy-and-water. He stated that two months previous to admission he experienced a feeling of tightness in the throat on swallowing dry and solid food. This tightness he referred to the region of the larynx, and stated that it had remained always present, although it varied a little in degree from time to time. This constriction, however, increased, so that three weeks ago he was only able to take soft or fluid food. He did not complain of pain. There was no history of syphilis or of injury to the gullet, nor had the patient noticed at any time blood in his sputum. On passing a No. 13 bougie a distinct obstruction was found eight inches and a half from the teeth, and this stricture was so complete that no instrument could be passed through it. On palpating the neck a hard swelling, two inches in length from above downwards, was observed, situated behind the cricoid cartilage and the trachea, but there was no enlargement of lymphatic glands or obstruction to respiration. Physical examination of the chest revealed nothing abnormal.

CASE 4. *Epithelioma of the œsophagus behind the cricoid cartilage; rapid development of dysphagia and dyspnœa, requiring gastrostomy and tracheotomy: good result.*—Mrs. C——, aged forty-three, was admitted into the Infirmary on Dec. 23rd, 1890, complaining of an obstruction to swallowing and slight pain in the throat, which sometimes extended to the ears. On inquiring into the history of the case it appears that she has always enjoyed good health, with the exception of trivial ailments, until the beginning of November, when she complained of pain and dryness at the back of her throat. On examination her medical attendant discovered the pharynx to be deeply congested, and a small ulcer was seen a little to the left of the middle line. Under treatment the condition of the throat improved, the ulcer healed up, and she felt much easier. A few days after this recovery she again consulted her doctor on account of difficulty in swallowing. He passed a probang into the œsophagus and "felt an obstruction on withdrawing it," and he noticed that the bougie was stained with blood. Slight hæmorrhage continued for some hours. Her attendant, Dr. Drysdale, suspected malignant disease; but, owing to the sudden onset of the symptoms, and the almost complete absence of pain, he felt reluctant in expressing an opinion regarding the nature of the disease, and advised the patient to consult me. When I saw her for the first time on Dec. 11th, 1890, she was weak, anæmic, and much emaciated, and stated that for the last three weeks she had been unable to take any solid food, but was still able to take fluid and semi-fluid diet with ease. She told me that since the middle of November the symptoms had steadily become worse, and that during the last six weeks she had lost considerably in weight, and, although she could not give me exact figures, she believed that she had lost about 28 lb. On examination, I discovered a hard, firm swelling immediately behind the cricoid cartilage, and extending from the level of the vocal cords downwards for a distance of about an inch and a half. It was found impossible even to pass a small-sized bougie, but on examination with the laryngoscope no encroachment on the lumen of the air passage was observed, either by pressure from behind or by invasion of the wall of the larynx. The voice was perfect, and the movements of the cords complete. On palpation externally, not only was the tumour described above apparent, but there were also several small firm swellings, the largest of which was about the size of an almond, and was situated to the right of the thyroid cartilage, where it was firmly adherent and embedded in the surrounding structures. Considering all the circumstances of the case, I advised the patient to come to Glasgow and have treatment in the Royal Infirmary, where I successfully performed gastrostomy on Jan. 29th.[8] When dismissed, although the lumen of the larynx was encroached upon, there was still sufficient air space to allow of the patient breathing freely. The right vocal cord was fixed in the position of complete adduction; voice good.

In those two cases the stricture was situated high up, and in both the onset of the symptoms and the development of the dysphagia were extremely rapid, so rapid, indeed, in the second case, as to raise a doubt whether the disease was malignant or inflammatory in its nature. This sudden difficulty in swallowing is probably the result of two circumstances. First, the disease involves the narrowest and least distensible part of the œsophagus; and, second, the action of the muscles of deglutition are directly interfered with by the tumour, consequently the food does not pass far enough into the gullet to allow the action of its circular fibres to come into play, hence the greater tendency of food to regurgitate into the mouth or larynx when the tumour is situated high up. In these cases there is still another danger, namely, obstruction to the entrance of air, either by pressure of the growth, leading to diminution in the lumen of the air passages by interfering with the circulation and producing œdema, or by the invasion of the larynx by the new formation.

In Case 4 tracheotomy required to be performed on March 28th—that is to say, eight weeks after the gastrostomy, on account of sudden œdema of the larynx.

(To be concluded.)

[7] In this case gastrostomy was performed on Nov. 6th, 1890, and the patient lived for exactly one year thereafter. At the post-mortem examination a scirrhous cancer was found at the level of the lower edge of the cricoid cartilage; no secondary formations; old tuberculosis and gangrene of lung.

[8] Patient was dismissed on March 21st, but on account of sudden onset of œdematous laryngitis she was readmitted on the 28th, when tracheotomy was performed, and she returned home much improved on April 25th, and is reported improving in strength on June 22nd, 1891.

THE BEARING OF RECENT BIOLOGICAL RESEARCHES ON THE PRACTICE OF MEDICINE AND SURGERY.

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IT has long been known that inert particles of various kinds, when mixed with blood just drawn from the vessels or injected into the circulation of the newt, are rapidly taken up by the colourless corpuscles, where they are enveloped in the motile protoplasm. Particles of vermilion introduced in this way are taken into the amœboid mass of the leucocyte, and in it are passed on from point to point in the channels in which leucocytes are usually found. The number of particles taken up by leucocytes which still retain their power of independent motion is sometimes very great indeed, and it has also been noticed that after a time these particles may be ejected, as though all that could possibly be utilised had been made use of by the cell. In the dust diseases of the lung the proliferating cells derived from the lining epithelium of the air-vesicles have a similar power of ingesting particles of various kinds.[1] These proliferating cells, with their contents, are apparently carried into the lymphatics of the lung tissue; here the pigment may be disgorged, when it is almost immediately taken up by leucocytes or by the stimulated connective tissue cells, or—and this appears to happen very frequently—the wandering cell with its contents is taken bodily into the larger actively stimulated connective tissue or fixed cells, where all that can be digested is converted to the use of the larger cell, and all inorganic matter and effete material is thrown out, to be again taken up, and carried from point to point, until eventually some, at any rate, may be actually excreted from the body or may become enclosed in a fibrous capsule

[1] It has recently been maintained that these cells containing the foreign particles are derived not from the epithelium, but that they are lymphoid cells or leucocytes which have made their way from the blood-vessels and lymphatics into the air-vesicles. It seems to me that we have direct evidence that this is not the case; the partially detached catarrhal cells that contain pigment or other foreign particles being usually well made out in well-prepared sections.

formed by the very fixed cells that took up the particles into their substance, especially in the lymphatic glands. Let us now go a step further. Examine a section of a lung from a case of chronic venous congestion resulting from mitral disease. Here will be found the same catarrhal condition of the epithelium noted above. In the proliferating cells there is also to be seen in some part or other of the section a considerable quantity of golden-brown pigment, usually in small irregular granules. On careful examination some of these catarrhal cells are seen to contain what can scarcely be anything but coloured blood-corpuscles. In most cases the outlines of these corpuscles have become irregular, as they have been altered by digestion by the ingesting cell; but here and there a plumper, more regular corpuscle, which gives us the key to the whole situation, may be seen. From this plumper ingested corpuscle the various transition stages—shrunken corpuscles, mere pigment particles, or even crystals of hæmatoidin—may be seen. These cells in turn are carried to the lymphatics and lymph spaces, where the same cycle is gone through as in the case of the carbon-holding cells above mentioned. If we examine the tissues around a bruised or incised wound after some time we find that two things have happened: the blood-corpuscles retaining the bulk of their pigment have been taken up by leucocytes, where they have been digested and the pigment has been set free, or the fluid in which the coloured corpuscles are suspended has dissolved out the colouring matter, which, however, ultimately finds its way into the leucocytes and thence into the large fixed cells already described.

It is evident from all this that certain cells in the body have the power of taking up not only foreign particles—i.e., particles derived from without,—but also of ingesting effete or dead material of various kinds and of carrying it to positions from which it may be cast out of the body. This function had been conceded to them for some time, when Karl Roser [2] suggested an extension of this function, which afterwards, in the hands of Metchnikoff, who approached the subject from an independent standpoint, was destined to create an interest in leucocytes unequalled in magnitude since the researches published by Hughes Bennett and Virchow. Dr. Karl Roser put forward as part of a theory as to the immunity enjoyed by certain plants and animals against the attacks of the pathogenic fungi that the contractile cells of the animal body have the power of taking into their substance and there digesting even the active living micro-organisms which in non-immune animals are capable of withstanding the attacks of the devouring cells, and of living on their own account in the tissues and fluids, where they give rise to their characteristic products and set up the special manifestations of the diseases with which they are associated. He held, indeed, that phagocytosis was an essential factor in the immunity enjoyed by non-susceptible animals. Metchnikoff,[3] whose thorough biological training had prepared him for the consideration of this important question, approaching it from the point of view of the pure biologist, swept aside much tradition and brought to bear upon it much new light. He already had Haeckel's observations on the blood-corpuscles of the lower invertebrates and their behaviour towards pigment particles on which to base his theory, but he went further back still. He knew well that amongst the lower invertebrates, the amœbæ and flagellated or ciliated unicellular organisms are actually dependent for part of their nourishment upon certain bacteria and fungi which they devour in large numbers, taking them into their substance, extracting from them what they require in the way of nutrition, and then disgorging the degenerated remainder. He pointed out that even one of these small monads is capable of taking into its substance in a very short time (a few minutes) filaments of leptothrix as much as ten times its own length. Here, then, we have living, undifferentiated, or only slightly differentiated cells actually attacking and utilising as a part of its everyday diet micro-organisms similar in many respects to those with which we have to deal in cases of disease.

Continuing his analogy, Metchnikoff pointed out that in animals somewhat higher in the scale of life, and composed of "layers" of specially differentiated cellular tissue, as in sponges, one special layer may still retain this peculiar general power of nutrition, the "mesoderm" cells of which the animal is in great part composed playing the part of the single amœboid protozoa. In the lower invertebrates, indeed, we appear to have the key to the whole position. The whole theory of phagocytosis may be said to depend upon intra-cellular digestion by undifferentiated cells, which cells, in consequence of their imperfect differentiation, retain their "amœboid" motions and powers of irregular contraction. This intra-cellular digestion carried on by the lower metazoa is the function upon which they depend in great part for their nutrition. Extra-cellular digestion carried on by means of enzymes secreted by the cells, but thrown out from the cell before they act upon the nutrient material, gradually makes its appearance as we get higher in the scale of animal life, and certain endoderm cells become specially set apart for this process; but even here the mesodermic cells still retain their power of carrying on intra-cellular digestion. Before we leave this part of the question it may be repeated that these imperfectly differentiated cells do not act in mere self-defence in taking up the lower forms of vegetable life, they are actually dependent upon this process of ingestion for their nutrition. It is not an isolated act or a function brought into play for a solitary or rare occasion, but it is a habit upon which the animal depends for its very existence. This fact is the more important when we bear in mind that any "fundamental" function of undifferentiated protoplasm is comparatively easily again brought into play or stimulated into activity when its presence is again required. It is a fact upon which the very foundation of the phagocyte theory depends, though one which has been too much ignored by most of those who have written on the subject in this country. As the extra-cellular digestive function becomes more highly developed less remains for the amœboid cells to do; but, as Metchnikoff points out, in all vertebrates there still remain amœboid mesoderm cells which retain the function or the power of absorbing and removing dead or effete matter, such as weakened or dead cells, foreign particles, and the like. If the development of an ovum, such as that of the cod, be carefully followed, the process of intra-cellular digestion can be easily made out at certain stages in the whole of the cells of which the embryo is composed. Later, however, when the layers are becoming differentiated, and certain sets of cells are becoming specialised, the two kinds of digestion may be seen going on side by side, the more differentiated cells being nourished by extra-cellular digestion, whilst the mesoderm amœboid cells still retain their phagocytic intra-cellular digestive activity. At certain periods of the life history of the incompletely developed animal, when the tail of the tadpole is dropped as it becomes developed into the frog, the degenerating muscles and nerves are seen to be devoured by active amœboid cells, which, commencing at one end of a fibre, gradually bring about its ingestion until the tail actually drops off. In the same way the larvæ of certain invertebrates, such as the echinoderms, lose parts or organs during their metamorphic stages; and whether as cause or effect, particles of the tissue of the disappearing organ or part are invariably found in great numbers of the amœboid phagocytic cells that have accumulated at the point where the absorption is going on; whilst in the metamorphoses of insects, where most profound changes take place in the transition from grub or caterpillar to chrysalis, and from chrysalis to butterfly, phagocytosis is a most important factor of the process. The changes go on so quickly that the rapid removal of effete material is absolutely necessary; and this, apparently, is readily accomplished by the enormous number of leucocytes which collect at those points at which organs or parts are to be got rid of.

Leaving the evidence afforded by the changes that take place during development, Metchnikoff continues his search for analogous conditions in the removal of dead or effete matter in after life, in the higher vertebrates after injury or disease, or even during the process of normal absorption such as that found in Ranvier's experiments on nerve-tissues. This observer found that dead nerve-fibres are removed through the intervention of amœboid cells which appear to take up the myelin of the nerve, and in their substance digest it or carry it away from the point at which the absorption is taking place. That certain cells have this power of absorbing effete matter had long been known, for it had been observed that in the absorption of bone certain large cells, the so-called osteoclasts or giant or myeloid cells, could be seen with granular particles in their interior as they lay in the Howship's foveolæ, which latter appeared to be nothing but excavations made by these large cells. Later still, and since the announcement by Metchnikoff of his phagocyte theory,

[2] Beitrage zur Biologie Niederster Organismen Marburg, p. 18, 1881.
[3] Annales de l'Institut Pasteur, vol. i. July, 1887.

numerous experiments and observations have been made on the ingestion of resistent particles by phagocytes. Small fragments of elastic tissue and, as we have already seen, of blood-corpuscles have been found in leucocytes, which in turn have been taken into the substance of those larger cells, which are apparently derived from the fixed connective cells. These fixed cells undergoing proliferative changes under stimulation, they lose their specialised form, and although, as a rule, they contain only a single nucleus, they approach comparatively nearly the amœboid leucocyte in the fact that they assume an amœboid activity. These large cells, the *macrophages*, as distinguished from the small multi-nucleated leucocytes or *microphages*, play an important part in determining the ultimate destination of all foreign particles, as already seen in the case of carbon pigment. In this connexion, too, may be noted those cases of the carriage of foreign matter to those parts where the building-up process is going on. In the formation of new bone at the end of the shaft or near the epiphyses there is always found an enormous number of small round amœboid cells, but in addition to these are others which must be looked upon as derived from the fixed connective tissue cells which are now in a state of active proliferation. When young animals during the period of bone formation are fed with madder waste there is formed at the seat of growth a pink layer or zone of bone, and it is pointed out that the colouring matter in this case taken up by the leucocytes is carried in the circulation to the point at which the leucocytes are specially required, the pigment is then given up, or is taken up by the more active connective tissue cells, to be again deposited in the young bone matrix as it is formed by the osteoblasts. That this is not a fanciful explanation of the presence of the pink colour in this position is evident from Arnold's observations[4] on the passage of inhaled pigment of various kinds from the lungs to the spleen, bones, and other organs. The process may be slow in the case of adults, but there is then this additional advantage from the observer's point of view: that once in position it remains much longer than when the development and absorption are going on more rapidly.

These mesoderm cells, then, according to Metchnikoff, have as one of their functions (it may be only a secondary function though he considers that it is the special function as we get to the lower end of the scale of animal life) the devouring of all those solid parts of the organism that have become effete or useless. Where they are unable singly to effect this they are seen to combine in order to attack with greater certainty of success masses which are too large to be enveloped in a single organism. In this manner whole bundles of leptothrix may in a sponge be enveloped in a kind of network which is found to be composed of amœboid cells; these cells combining to bring about what, singly, they could not possibly manage. Particles of organic or other matter when introduced into the abdominal cavities of certain of the echinoderms may, if small, be taken up by single cells; but in the case of large particles a dozen or more of such cells appear to unite to form a plasmodial mass, which in this form is enabled to cope with them. The same thing is observed in the giant cells or osteoclasts of bone, which consist of large masses of active protoplasm, with many nuclei usually accumulated near the centre. It may be objected that these large masses may be the result, not of aggregation, but of imperfect division. This undoubtedly may sometimes be the case, for in the parablast of an ovum, or that layer of cells immediately in contact with the yelk of the egg, we have a mass of protoplasm in which, although there occur proliferation and separation of the nuclei, there is no definite segmentation of the protoplasm itself as it increases in amount and the cell increases in size. In these cases, whether it be in the sponge or in the echinus where there appears to be aggregation, or in the parablast of the ovum of a cod where there is partial segmentation, the vital activity of the component individual cells is not only summated, but greatly increased in the resulting giant cell, in which there remains, after the removal of the special cause of the formation of this large plasmodial cell, an increased power of tissue formation. That is, they have, during this period of increased activity, laid by a store of food and energy, though in the parablast it is utilised by being handed on to the cells in the immediate neighbourhood. In pathological conditions such as tubercle, where giant cells are formed, the extra formative power is utilised in the construction of fibrous tissue or in resisting the invasion of the bacilli. That these cells are actively digesting in the myeloid sarcoma is evidenced by the fact that red blood-corpuscles in various stages of degeneration may be seen, sometimes, however, only in the form of particles of pigment which remain undigested and fixed in the cell longer than the proteids of the corpuscle. Helme has also pointed out that similar giant cells or plasmodia play an important part in devouring the degenerated muscle fibres of the involuting uterus, in which the process of absorption must necessarily go on at a very great rate indeed; whilst coming back to the connective tissue cell, Bevan Lewis maintains that the neuroglia cells, and not the leucocytes, play the part of scavengers in the removal, or rather the taking up and digestion, of dead or weakened nerve elements and tissues. So far we have spoken of the phagocytic action of these cells in relation to dead solid particles, except in case of blood pigment dissolved out from red blood-corpuscles. In this case the phagocytes appear to have the power of separating it and in their substance of rendering it insoluble. It is probable, also, that they have the power of taking up and converting within themselves abnormal chemical products which, as pointed out by Wood and Maxwell Ross,[5] are to be regarded in a very real sense as foreign bodies in our organism. If this be true, Metchnikoff's theory must be made to include much that he does not at present allow to come within its range.

In all the examples of the phagocyte theory here put forward the amœboid cells have been looked upon as simply doing the work of scavengers. Their duty is to remove innocuous material, organic or inorganic—or, at any rate, material that has, in the quantities in which it is usually present in the organism, no deleterious effect on the phagocyte cells. In the case of phagocytosis in the single-celled amœba or in the mesoderm of the sponges, on the other hand, the cells actually attack micro-organisms, take them into their substance, and use them as food; so that it would appear as though, in the process of development, this latter power had been dropped, and that, nothing remaining to be done but the "scavenging," except under exceptional circumstances, the more active attacking power had been, in great measure, lost through disuse. Metchnikoff holds, however—and this is the fundamental part of the whole question—that, under certain conditions of stimulation, the scavenging phagocytes regain their original function in so far that, when the call is made on them, especially if this call is led up to gradually, they may not only remove dead tissues and innocuous micro-organisms, but they may actually destroy micro-organisms, which, if introduced without sufficient preparation of the leucocytes for their reception, would not be taken up, but would gain the upper hand, and ultimately lead to damage or destruction of the organism in which the experiment is made. In this case the amœboid cell regains its phagocytic function from the nutritive point of view, whilst its secondary or scavenging power is relegated to a comparatively unimportant position. In order to accentuate this fact, we may here repeat the oft-repeated, but still important, experiments made by Metchnikoff on the daphnia or water-flea with the spores of the monospora biscupidate. In this monospora, which occurs as a budding mycelial thread of elongated cells, long, thin, needle-like spores make their appearance in the long axis of the cells. These needle-like spores are taken into the alimentary canal of the daphnia, through which they are driven by the peristaltic action of the intestinal muscles. Once in the body cavity, or in the tissues surrounding the intestine, it is immediately attacked by the white blood-corpuscles, though in some instances it appears to be taken up by the connective-tissue corpuscles, or, again, it may develop into the rod-shaped vegetative form. If the daphnia is in moderately good health, which under ordinary circumstances happens in about 80 per cent. of the cases experimented on, the monospora is gradually overcome by the active devouring cells. If, on the other hand, the insect is feeble, or if the spores are ingested in such large quantities that they outnumber the leucocytes, or some are left free after all the leucocytes are engaged, these multiply so rapidly that the daphnia quickly succumbs to its attacks. This at first seemed an absolutely convincing proof of the accuracy of the theory that Metchnikoff had advanced; but it was

[4] Untersuchungen über Staubinhalation und Staubmetastasie Leipzig, 1885.

[5] Edinburgh Medical Journal, June, 1891.

still objected that here the conditions for the existence of the monospora were not similar to those in which micro-organisms are present in the bloodvessels or in the fluids in which the tissues are bathed. In order to overcome this objection, he took little pith boxes, placed the spores of pathogenic organisms inside them, introduced them into a pocket under the skin or even into the blood-stream, with the result that only the fluid could gain access to them in the first instance at any rate. Nevertheless, the spores vegetated most luxuriantly. Ruffer,[6] repeating these experiments with the bacillus Chauvœi, found that not only were the fluids of the body innocuous; but that they actually formed an excellent culture medium, in which the organism could grow, and attenuated micro-organisms regain much of their pristine virulence. He found, for example, that when the attenuated bacillus Chauvœi supplied for purposes of vaccination was placed in small bags made of filter paper sealed with paraffin and then introduced under the skin of a susceptible animal, and even of a non-susceptible animal, it grew luxuriantly. If now the bag was broken *in situ*, so that the organisms could find their way into the tissues, or if the bag was cut out immediately after the animal had been killed with chloroform and the contents inoculated into a second animal, it succumbed sometimes after a shorter period than when ordinary virulent material was inoculated. In this case therefore the fluids cannot have any deleterious effect on the micro-organisms, so that any destruction of these that takes place after inoculation in the ordinary fashion must be accounted for, according to Metchnikoff and his pupils, by the phagocytic action of the amœboid cells The action of pus-producing micro-organisms, the spirillum of relapsing fever, and the bacillus anthracis have all been fully studied in their relation to phagocytes; but one organism has been taken as the one by which the phagocyte theory is to be tested.

It is objected by the opponents of the theory that the leucocytes (microphages) are always a little too late to catch the erysipelas streptococcus, the organism being found in a zone always a little beyond that in which we have any evidence of inflammation. Wood and Maxwell Ross[7] showed that, although this was undoubtedly the case, the following inflammation appeared to exert a curative influence, in so far as it appeared to cut short the infective process. Metchnikoff[8] and Fehleisen, describing the appearances presented on microscopic examination, give first of all an outermost zone, where the erysipelas is spreading, but which to the naked eye appears almost normal, in which the micrococci, multiplying rapidly, completely fill the lymphatics. There is little or no evidence of inflammatory reaction. Passing inwards, however, we come to a zone in which inflammatory reaction has set in. The vessels are dilated, the fibrils of the connective tissue are swollen, and surrounding the small vessels and lying in the lymph spaces are numerous amœboid cells, leucocytes, or microphages, which, like their amœboid types, are acting the part of devouring cells, as many of them contain micrococci, sometimes in considerable numbers. The micrococci are usually so readily stained that they may easily be recognised in specially prepared specimens. Now comes the interesting point. In the next zone these smaller cells with their contents are in turn devoured by the larger amœboid cells—macrophages, probably derived from the fixed connective cells, and each containing a single nucleus only. After this the organisms found in the tissues over which the disease has passed contain only dead and degenerated micrococci; so that, as Wood and Maxwell Ross say, "It would thus seem that the wave of congestion, accompanied as it is by a diapedesis of the white blood-corpuscles, has, in fact, cut short the course of the disease." Arguing from this, they decided that if they could set up a certain amount of inflammation they could cut short the duration of the attack; in fact, that they might be able to localise it more or less completely according to the stage at which the disease came under treatment. They therefore decided to use iodine as a local irritant, applying it "in the form of a ring *slightly beyond that portion which is already affected.*" They say, "It is naturally very important that inflammation should extend beyond the limits of the disease in order that it may act as a barrier to its further progress. It is, we think, very probably to the fact that the microbes have already penetrated in the tissues beyond the point where we have the visible signs of their action that we must ascribe the statement so frequently made, that although the treatment with iodine and with other irritants exerts a checking influence as a whole, yet at some point or other the affection still continues to spread. We may in these cases suppose that at some places our zone of irritation was not sufficiently in advance of the presence of the erysipelas cocci. The application of the irritant over the whole surface of the affected skin seems also, on the whole, undesirable, inasmuch as, in consequence of this, the dilatation of the vessels at the margins, which we have considered as the most important factor in the cure, must be interfered with by these being drained into the collateral vessels of the skin, and thus tending to diminish the intensity of the process in this region" Basing their treatment on what had been observed, and bearing in mind the nature of the disease and of the spontaneous cure, they painted with iodine in the manner above described patients suffering from erysipelas, and in all cases where there was any chance of treating the disease the results obtained were most satisfactory, as the barrier of inflammation so set up appeared to serve its purpose most effectually. These observers, however, do not allow that the only effect of the inflammatory process is to bring up phagocytes to cope with the micrococci; they maintain, indeed, that there are two other very important factors to be taken into consideration. They hold that the dilatation of the vessels with the increased flow of blood may allow of the toxines produced by the microbe (which are said to have a paralysing effect on the phagocytes, which are thus unable at first to ingest the active living microbes), whilst, in the second place, they think that the relatively increased supply of oxygen brought up by the increased quantity of blood may be sent on to "the lymphatics, where the oxygen tension must naturally be very low. That this will favour the tissues rather than the microbes in their struggle is evident, when we consider that the streptococci of erysipelas in the animal body flourish best under anaerobic conditions, as is indicated by their strict limitation to the lymphatics." But they say that "the checking of the disease ..... by applying an irritant, such as iodine, in advance of it, indicates that the irritation to the cells and the new set of conditions thereby induced can alone cut short the affection." Since the publication of the paper here referred to, Dr. Alex. Miles, who assisted in carrying on the first series of experiments, has treated a large number of cases of erysipelas with marvellously successful results—results which, I am informed, will shortly be published.

It has been stated above that in the outer zone of the erysipelatous area the cells appear to be paralysed so that they cannot take up the micro-organisms. De Bary observed that in myxomycetes there were certain substances which, when brought near the plasmodium, exerted a vigorous repellent effect, so that it was energetically driven off. If, however, care was taken to bring these same substances near the plasmodium in sufficiently small quantities and sufficiently diluted, the organism would gradually become habituated to the presence of even the concentrated dose. Applying this fact, Metchnikoff pointed out that acquired immunity might be due to a similar kind of acclimatisation of the cells to the presence of what, under ordinary conditions, would not allow the cells to come into sufficiently close contact with the microbes to allow of their ingesting them. This power can undoubtedly be greatly modified, especially if the conditions be modified very gradually and slowly, and cells which at first would be quite incapable of reacting in the presence of a specific poison may ultimately be able to withstand and perform their special phagocytic functions in the presence of considerable doses of this same poison. For example, Beumer and Peiper[9] have demonstrated that if a certain dose of the poison produced by the typhoid bacillus will poison an animal, paralysing the amœboid cells, the same dose may be given to an animal that has been carefully prepared by the administration of repeated—at first small, but gradually increasing—doses of the same poison. The phagocytes are educated, or acclimatised as it were, to their new set of conditions, their original power of devouring even pathogenic organisms is regained, and the disease is kept under, as in the case of the healthy daphnia in which the dose of spores is not too great.

(To be continued.)

[6] Annales de l'Institut Pasteur, Dec. 1891.
[7] Loc. cit. [8] Virch. Archiv, Bd. cvii., 1887.
[9] Zeitschr. f. Hygiene, 1887, s. 133, et seq.

ON SOME PAINFUL AFFECTIONS FOLLOWING INFLUENZA.

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I PROPOSE in this short communication to pursue the inductive method of reasoning in regard to some cases which at one time caused me considerable perplexity. I will first mention a case which initiated my difficulties. A gentleman aged fifty-three, who for many months previously had been in fair average health, was taken during the night with severe pain in the right hypochondrium. The signs simulated those of hepatic colic. He took a mild aperient, and the attack passed away after one to two hours and he slept. The following day the bowels were properly opened, there was no evidence of absence of bile from the motions, the urine was in all respects normal and contained no bile nor excess of colouring matter. The attacks of severe pain, however, recurred at intervals—mostly in the night, but sometimes during the day—for about ten days, treatment by opium and belladonna only relieving them. It seemed that the gall-bladder could be mapped out by the area of tenderness, but never was there the slightest jaundice. On one night there was sharp diarrhœa. I could only say that the attacks were those of hepatalgia of paroxysmal recurrence. In hunting about for a cause the only antecedent which seemed at all probable in this direction was an attack of influenza contracted in Paris at the very earliest time of the epidemic, and followed by protracted enfeeblement. I computed that nearly twenty months must have elapsed between the original attack and these consequences, if they were consequences. There was no evidence of reinfection, but of course this was possible.

The key seemed to be furnished by a number of experiences which came to me just about the same period as this first instance. In all there was fair evidence of an attack of influenza followed at intervals, extraordinarily variable, by signs of extreme pain and distress. In twenty-four such cases the sites of pain could be thus tabulated:—1. Epigastrium, nine cases; abdomen generally two cases; localised in hepatic area, one case. 2. Head, various sites, seven cases; supra-orbital region, one case; right inferior maxilla, one case. 3. Heart region, seven cases. 4. Extremities: hips and legs, two cases; calves, two cases; arms, two cases; right sciatic region, one case; fingers, one case; lumbar region, one case.

In Group 1 in some cases the pain at the epigastrium was nearly constant. For instance, a man aged sixty-six, who had been previously quite healthy, caught influenza at Christmas 1890, and had never felt well since. Six months afterwards he had constant pain at the epigastrium, with craving for food. Food slightly relieved the pain, but soon after nausea occurred, with pyrosis. In most cases the pain was paroxysmal, and frequently nocturnal, sometimes attended with vomiting or pyrosis. Peculiar symptoms occurred in some of these cases, as "a feeling as of a cold wind over the chest, and inability to take a deep breath." In some the signs of colic, as in the first case mentioned, were closely simulated; frequently there was retching, but the tendency was rather to diarrhœa than to constipation. In one case, a man of sixty-three suffering from intense epigastric pain, with sense of heavy weight preventing sleep, and some vomiting, I found a small patch of herpes zoster below the angle of the right scapula.

In Group 2 were various neuralgiæ. In one man aged thirty-eight there was intense supra-orbital neuralgia varying from side to side; previously there had been rigor and abdominal pain like colic, and then sweating and palpitation. He had suffered from influenza twelve months previously, but no ailment since. In another case, a lady aged twenty-five, urticaria followed influenza, and twelve months afterwards attacks of vertigo, with palpitation of the heart and pain referred to the occipital regions. A lady of thirty-seven, who had suffered from an attack of influenza in May, 1891, averred that two months afterwards she commenced to have headache, from which she had never been free in her waking hours for three months subsequently; she also suffered from pain on movement of the right lower jaw. She had tremors and tinnitus aurium, but no vertigo. In others headache occurred coincidentally with gastric crises.

In Group 3 some of the patients referred the pain which they suffered very closely to the region of the heart. In a few cases the pain was persistent, but in most paroxysmal. A lady aged forty-two, who had suffered from influenza nine months previously, described the pain as constant and dull, limited to the heart region. A gentleman aged thirty-six, whose attack dated sixteen months previously, was wearied with such dull aching; it was rather more diffused than in the former case. In another gentleman, aged forty-two, the constant pain in the cardiac region was accompanied by a tingling down the left arm The most important and characteristic cases in this group, however, simulated angina pectoris. A gentleman aged thirty-one, typically athletic, who had never suffered from illness before his attack of influenza, which was very severe, was taken five months afterwards with sudden and violent pain at the heart, eventuating in syncope. He was standing with his back to the fireplace, talking with friends, when the attack seized him with violence, and he fell unconscious upon the hearth-rug. There was no epileptoid sign. Another attack occurred a week after. There could be no doubt from collateral evidence that the patient became faint to unconsciousness. In the intervals no notable deviation from health could be detected; the left ventricle was slightly hypertrophied, but not more so than could be expected in an athletic subject The patient described the pain as of the character of a "grip" or "screw" at the heart; he experienced no coldness, and repudiated any sense of impending death. There were occasionally also some attacks of dyspnœa, occurring independently of exertion. Nearly at the same time at which this patient came under my observation a gentleman came under my care with like symptoms, in whom there was no evidence of an attack of influenza. He presented the appearance of typical good health, but suffered attacks of terrible pain at the heart, ending in complete unconsciousness. On some occasions the attacks were followed by wild excitement, and the patient had to be restrained from self-violence. I have reason to believe that in both these cases there was complete recovery. In a lady, aged forty-one, attacks of intense pain were initiated by exertion. The pain was localised in the second left intercostal space—presumably over the superior cardiac plexus—and here was a tender spot. The pulsations of the heart were painfully felt when in the recumbent position. In some other cases there was a feeling of impending death, as in true angina pectoris, though the pain was much less severe. This occurred in a gentleman aged thirty-three, sixteen months after an attack of influenza. Pain referred to the heart, however, had occurred at intervals ever since his attack. In the case of another gentleman aged thirty-seven, the sensation was described as of an arrest of the heart, as if the pendulum of a clock had been stopped at one swing. With this the patient said, "I feel as if I were going to die." In some cases there was a manifest slowing of the pulse; in others an irregularity. Sometimes a slow alternated with a quick pulse. Fifteen months after an attack of influenza I counted the pulse of a lady aged twenty-two as fifty-six. In most cases the rate was rapid, and I do not remember one case in which the arterial tension was unduly prolonged. This absence of prolonged arterial tension, in my opinion, took the cases out of the category of true angina pectoris. I have not heard that any case was fatal.

It is no part of my purpose to pursue the question of the cardiac phenomena of influenza. These furnish most interesting lessons, but I am concerned now only with the manifestations of *pain*. I turn now to Group 4, in which there were painful affections of the extremities. A lady aged twenty-five, who had an attack attended with high fever four months previously, complained of intense aching in both arms. This occurred chiefly at night, and she actually wept on account of the pain. Previously to the manifestation in the arms she had suffered pain in the calves of the legs resembling that of neuritis. In another case of a gentleman aged forty-one, the pain was referred to the lumbar regions more on the left side, to the right shoulder and the left wrist, to the course of the right sciatic nerve, and to the muscles of the thigh. There were fearful exacerbations, chiefly nocturnal, so that the patient, previously a healthy man, actually shrieked on account of the pain. In the case of a female aged thirty-three pain was localised in the muscles of the calves of the leg and of the thigh. The pain was strongly aggravated after food, especially meat. In another female, aged twenty-three, pain was extremely violent in the thighs and legs, and there

were attacks of faintness. Subsequently the suffering was localised in the course of the right sciatic nerve. It was subject to remissions with severe nocturnal exacerbations; there were also shooting pains at the epigastrium. The case was of alarming intensity, but recovered. In a lady aged forty-eight pain was referred to the right hip and to the right arm; it extended from the right shoulders to the fingers, and all movement caused pain.

There could be little doubt that in these cases there was a form of neuritis. I met with other analogous instances in which there had been no history of influenza: one case in a child in whom there was severe pain in the calves, dropped feet, absolute loss of motor power, and, in fact, all the signs of neuritis of the alcoholic form. Any causation by alcohol was in this case quite out of the question; no doubt it was due to some infectious cause, and resembled the cases of peripheral neuritis, due to no traceable contagion, recorded by Dejérine and others.

In this summary of my personal experiences I have dealt with no cases of the earliest manifestations of influenza; all were in patients whose attack had passed away and who were not confined to their homes. The periods between the attack of influenza and the manifestations of symptoms of pain varied from a few weeks to twenty months.

The evidence appears to me to confirm the view of Dr. Althaus that the *materies morbi* of influenza resembles the syphilitic virus in its tendency to attack many parts of the nervous system after the attack is over, but surpasses the syphilitic toxine in virulence and in rapidity of action. Dr. Althaus[1] has adopted the deductive method in his reasoning. Starting from certain probabilities, he has worked out the problems of the effects of the *materies morbi* if it should specially attack certain areas of the central nervous system. He concludes that the different forms of influenza are due to irritant poisoning of the bulb and the nerve nuclei contained in it. Adopting a converse method, that of logical induction, and taking my arguments alone from personal experience, I have arrived at a similar conclusion to Dr. Althaus in so far as the proposition is concerned—that the virus of influenza especially affects the nervous system. Leaving the question of the acute and early manifestations, however, which I agree with Dr. Althaus in considering to be due to involvements of certain areas in the medulla oblongata, it appears to me most probable that the consequent phenomena are better to be explained by inflammatory changes in certain peripheral parts of the nervous system. In regard to the *visceral neuralgiæ*, the hepatalgia, the gastralgia, and cardialgia, there are signs of localisation and, in some instances, of local tenderness that point to a local cause. In some such it seems probable that the sympathetic fibres and ganglia are alone affected. In other cases, as in those in which there seems to be temporary arrest of the heart's action, retching, vomiting, and various disturbances of digestion, it is most probable that the vagus is involved in greater or less degree; but here also the effects might be due to peripheral irritation. In the sensori-motor manifestations it can scarcely be possible to avoid the conclusion that there is in existence a form of neuritis analogous to that which is caused by many other toxines. The conclusion, therefore, which I have come to is that the various affections I have briefly described are the remote consequences of the influenza infection, and that their proximate cause is a peripheral neuritis affecting the sympathetic ganglia and nerves, the vagus, and the sensori-motor nerve trunks.

Harley-street, W.

ON THE TREATMENT OF SPREADING ULCER OF THE CORNEA WITH HYPOPION.

By RICHARD WILLIAMS, M.R.C.S.,

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FEW affections of the eye are more rapid in their progress or more destructive in their consequences than those cases of ulcer of the cornea with a collection of pus in the anterior chamber, and yet I believe there are not many affections more amenable to prompt and appropriate treatment. I propose in this paper to introduce a method of dealing with these cases which, as far as my knowledge extends, has not hitherto been in general use, and which consists, first, in the local application of quinine; and secondly, in a modification of the usual incision for the evacuation of the pus contained in the anterior chamber. I am able to speak of this method of treatment after an experience of several years, during which I think I have had ample reason to be satisfied with its results. As is well known, these cases are met with among the debilitated of all ages, most frequently as the result of traumatism. Among the colliers of the Wigan district they occur with unusual frequency, and I venture to assert, therefore, that my experience of them is above the average. In their treatment I have employed a solution of quinine during a period of upwards of ten years. The following mixture is used in nearly all cases that come under my care: R. quiniæ sulph. neutr., gr. iv.; liq. atropiæ sulph., ℥ i. M.; ft. guttæ. In simple ulcers without hypopion I am in the habit of prescribing eserine much oftener than atropine, but I invariably prescribe the latter drug where hypopion is present, because iritis is a common feature in this condition. I doubt if either eserine or atropine has any appreciable influence upon the suppurative process. On the other hand, there is hardly anything in medicine about which I entertain less doubt than that quinine locally applied has an immediate and powerful influence in arresting this process and in causing the absorption of the pus already collected in the anterior chamber. I believe I have had repeated evidence of this both in my private practice and public clinique.

It is not my intention to burden this paper with a number of cases which seem to me all to tell the same tale, but I cannot refrain from quoting the following case, which I think not only shows the value of quinine, but also tends to prove that atropine and eserine by themselves have no great, if any, influence upon the process of pus formation:—

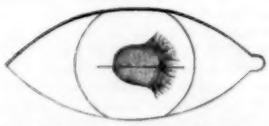
D. J——, aged eighteen, was admitted into the Eye and Ear Infirmary on June 24th, 1882, for capsular cataract due to an injury five years previously. I am indebted to Mr. Shears, who was then house surgeon, for the following notes of the case:—Soon after admission the opaque capsule was removed *en masse* by means of the cannula forceps, and two days later the patient, whose vision before the operation only amounted to perception of light, could count fingers with ease. The following day a hypopion appeared, and atropine and belladonna fomentations were ordered every three hours. On the 28th, the hypopion still remaining, quinine was added to the drop.—29th: "Hypopion much smaller."—July 1st: "Hypopion gone." The quinine and atropine drops were continued until the 8th, and eserine substituted.—12th: The hypopion reappeared, and the quinine and atropine drop was again used.—14th: "Hypopion gone, muddy condition of anterior chamber clearing up."—17th: Atropine alone was ordered.—19th: Hypopion reappeared with pain and injection; atropine and quinine drop again resorted to.—22nd: "Hypopion gone."— 26th: Patient discharged. $V = \frac{20}{30}$ c. + 6 D. J. 1, c. + 12 D. It will be noticed that in this case the hypopion made its first appearance while the patient was under atropine, and that it quickly disappeared when quinine was added to the drop. Its reappearance took place each time when the quinine was omitted, although the atropine or eserine was still continued. In other respects the treatment was not varied, the patient taking quinine internally from the first appearance of the hypopion.

I may also mention a recent case recommended to me by Dr. Bouverie MacDonald of Liscard. Mr. McW——, aged nineteen, had only complained of his eye about thirty-six hours before he was sent to me. I found an abscess of the cornea and a large hypopion. The cornea generally was hazy and the aqueous turbid. The conjunctiva was slightly chemosed and discharging muco-purulent matter. In fact, the disease had been sudden in its onset and extremely rapid in its progress, and I have no doubt that a delay of twenty-four hours would have seriously compromised the safety of the eye. I ordered quinine and atropine drops, to be used every two hours, and quinine internally three times a day. No other treatment whatever except a pad and bandage was employed. Two days later there was a marked improvement, and in four or five days the hypopion had completely disappeared. It may be argued that these cases often recover under atropine or eserine, hot fomentations, and antiseptic lotions, and that they are no proof of the value of quinine locally applied. It is obvious that positive proof is practi-

[1] THE LANCET, Nov. 14th and 21st, 1891.

cally out of the question in cases of this description, and it is only after comparison of a long series of cases treated by both methods that anything like an authoritative opinion can be ventured. A vivid recollection of the frequency with which these cases went from bad to worse in my earlier years leaves no doubt in my mind of the immense superiority of the quinine treatment. I am far from saying that all cases of hypopion can be made to disperse by means of quinine; but I am constantly seeing cases in which, in my judgment, the process is quickly arrested, and which would otherwise inevitably require operative measures. Old cases where the pus has become mixed with fibrinous material will no doubt require evacuation, but I believe that even then the use of the quinine drop exerts a powerful influence in preventing the reaccumulation of the pus. Before leaving this part of the subject, I may say that patients make no unusual complaint of smarting in using the drops. An aqueous solution of the soluble quinine is innocuous, and can be used as frequently as necessary without the least detriment to the eye. Coming, then, to those cases where the evacuation of the pus by operation is imperatively demanded, the question arises, What is the best method of performing paracentesis? There are two methods in ordinary use: First, by making a horizontal incision, parallel with the margin of the cornea, just underneath the purulent collection; and secondly, Saemisch's incision, which consists in passing the knife into the anterior chamber at the spot where the ulcer may happen to be and dividing it through and through, as shown in Fig. 1, the

FIG. 1.



Saemisch's incision. After De Wecker.

blade entering the anterior chamber and emerging from it in healthy tissue.

To the first of these incisions I think there are serious objections. 1. The anterior chamber does not empty itself well, especially when the knife is slowly withdrawn, as is generally advised. 2. There is considerable danger of prolapse of the iris. 3. There is the maximum danger of interference with the nutrition of the cornea, because more of the nutritive channels, which are radially arranged, are involved in the incision. In fact, the only advantage this incision possesses, as far as I can see, is that it leaves no visible scar. Personally, I have entirely abandoned it for several years. Secondly, Saemisch's incision. I believe the good effect which undoubtedly follows this incision is due, not to the fact that the ulcer is cut through, but because the anterior chamber is more thoroughly emptied of the pus. On the contrary, any incision of an already attenuated and weakened part of the cornea must, it seems to me, be in itself injurious. I have not seen any reason advanced for dividing the ulcer itself as practised by Saemisch, and, unless it can be shown that this method possesses some curative influence other than is brought about by the thorough evacuation of the anterior chamber, I believe an incision in healthy tissue is decidedly to be preferred. Moreover, it is evident that if the ulcer should happen to be situated in the upper two-thirds of the cornea, the evacuation of the contents of the anterior

Fig. 2.

chamber must be a matter of some difficulty; and this is probably the reason why authors generally agree that the incision should be reopened daily for some time. It requires no great knowledge of the subject to see that this reopening of the chamber is a great drawback to the progress of the case. It prevents healing and greatly facilitates the formation of anterior synechiæ, not to speak of the pain and the annoyance it gives a patient already reduced and little able to bear them.

Basing my practice on these considerations, I now always make the incision as shown in Fig. 2. I introduce an ordinary Graefe's knife into the anterior chamber underneath the purulent collection, and carry it directly upwards in the direction of the pupil, care being taken not to enter the pupillary area. I withdraw the knife rather quickly with a forward motion, and the result is that the aqueous escapes with something of a rush, carrying with it the purulent mass which generally sticks between the edges of the incision, where it can be easily picked out with a pair of forceps. Any remaining fluid pus immediately follows, and the anterior chamber is left perfectly empty. I think this incision has distinct advantages over the others to which I have referred. 1. It is made at the seat of the purulent collection, and being *in the line of pressure* from behind, the evacuation is as complete as it can be. 2. Being made in the direction of the nutritive channels, it offers the minimum of interference with the nutrition of the part. 3. Prolapse of the iris is impossible, because the effect of pressure of the muscles upon the globe is to bring the edges of the incision together, and so effectually to prevent protrusion of the iris. 4. Being made entirely in healthy structure, it heals by first intention, and I *never have occasion to reopen it*. If, after practising this incision, the case goes from bad to worse, it is not because the anterior chamber requires to be reopened, but because of the continued spreading of the ulcer. I have no doubt, however, as already mentioned, that the use of the quinine drop after the operation has much to do with preventing the reformation of the hypopion. In the event of the ulcerative process continuing and threatening, as it sometimes does, the entire surface of the cornea, I consider the actual cautery the most effectual means at our command for arresting the spreading process. In conclusion, I think the only objection likely to be advanced against this incision is that it leaves a scar; but I consider this a purely theoretical objection. The incision need never encroach upon the pupil, hence no interference with vision need be apprehended, and the scar, being linear, is practically invisible against the background of the iris.

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SOME CASES OF RENAL COLIC.

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IN dealing with any case of severe abdominal pain, which recurs from time to time in a paroxysmal way, it is usual to make inquiries as to the precise starting point of the pain, and the directions in which it radiates, and to ascertain the occurrence of any accompanying symptoms which may throw light upon the diagnosis. The information thus gained will frequently form the foundation for further investigations, and thus the clinical features of the case may often be elucidated with ease. Thus a woman aged fifty, who was recently under my care at King's College Hospital, gave the following account of herself: Until three years ago she had had no serious illness, but at this time on several occasions she passed blood with her urine, and this hæmaturia was mostly accompanied, preceded, or followed by somewhat severe lumbar pain in the right side. After these attacks there was frequently more or less acute pain on micturition, which, however, gradually subsided. The association of hæmaturia clearly pointed to the renal origin of the colic, and, although the pain in these earlier attacks does not appear to have been as severe as usual in cases of renal colic due to calculus, there was no difficulty in arriving at a diagnosis, since the immediate cause of her appearance at the hospital was an attack of very severe pain, during which she was repeatedly sick, and on examination the urine was found to be highly charged with blood. Mostly the passage of the first renal calculus along the ureter is attended by more pain than in later attacks, since the ureter becomes more distended each time a calculus passes along it, and thus offers but little opposition to the passage of a small calculus. In this

case, however, there could be no doubt that a calculus of much larger size than usual was making its way down the ureter, or perhaps had already reached the bladder. All cases of acute abdominal pain do not disclose their etiology as readily. The common causes of true colic are hepatic, nephritic, and the form due to lead poisoning. Renal colic usually commences somewhat acutely in the region of the kidney and shoots downwards towards the groin, sometimes being associated with aching and tenderness of the testicle, or even with pain on the inner side of the thigh. Sometimes, however, it passes upwards from the original site, so that tenderness or actual pain is referred to the angle of the scapula or even to the shoulder-tip, and then it is most important to consider the associated symptoms to distinguish the case from one of hepatic colic, in which the pain, starting in the right hypochondrium, radiates backwards and upwards in the direction of the shoulder. A short time ago I saw such a case in consultation, where, in the absence of hæmaturia, the vagueness of the localisation of the pain and the indefinite way in which it radiated, left considerable doubt as to its nature, until the appearance of bile in the urine rendered it certain that we were dealing with hepatic colic. In cases of lead colic the pain appears to start at almost any point within the abdomen; but it is referred mainly to the region of the umbilicus, and is generally relieved by pressure. Although by thus endeavouring to trace the course of the pain a great deal may often be learnt, occasionally the indications are misleading. Thus a case I saw in consultation a few years ago baffled all concerned. It was in a schoolboy aged twelve, in whom there was a history of hæmaturia, with severe pain, after another boy had jumped suddenly and roughly on his back. There was only this one attack of hæmaturia, but from this time there were frequent complaints of severe pain, which seemed to return with any sudden jolting movements, a railway journey or a ride in a hansom cab often proving sufficient exciting cause. It was also noted that the pain was worse with constipation or with acute diarrhœa. Digestion was imperfect and the urine contained numerous crystals of oxalate of lime. Although no certainty was felt about the presence of a renal calculus, it was generally thought that the symptoms might be due to this, and that an operation was advisable as affording the best prospect of relief. At the operation no stone could be found, although the pelvis and the substance of the kidney were carefully explored by a needle. A firm cicatrix was, however, discovered uniting the capsule of the kidney and the descending colon, and this was so tough and so extensive that it was deemed expedient not to divide it. This, then, furnished the explanation of the symptoms and the occurrence of pain after intestinal irregularity. The lad recovered, and is now able to keep fairly free from pain so long as he attends closely to the action of the bowels. As a parallel case I may mention another which has interested me greatly during the last two years. The patient, a young lady, first complained of increased frequency of micturition with pain, and the urine was found to be charged with pus. Considerable improvement followed the administration of alkalies, and later I continued to hear good accounts of her progress when she was treated by a surgeon with vesical injections of nitrate of silver. Eighteen months after the onset of cystitis she again came under my care for sudden severe pain in the lumbar region, far more intense than any pain she had previously suffered, and accompanied by sickness and by complete prostration. She has now had several of these attacks of renal colic, and the deeply interesting fact has been ascertained that for a short time immediately before one of these severe attacks the urine has usually been remarkably free from pus, but that shortly afterwards it is once more turbid and opaque. Clearly the explanation is that, although the case started with simple cystitis, the inflammation has extended to the pelvis of the kidneys, and that one ureter is occasionally blocked by a thick tenacious clot.

The pain in ordinary cases of renal colic has been variously attributed to direct irritation by the calculus, which is occasionally of a mulberry form, or to the over-distension of the ureter above the calculus. Neither of these explanations appears to me quite satisfactory. I believe that the cause may be gathered by reference to the other common forms of colic. The bile is secreted at such low pressure that hepatic colic can scarcely be due to over-distension, while gall-stones are usually so smooth that, in spite of their facets and angularity when multiple, it would seem unlikely that direct irritation can result. In the case of lead colic there is no stone to cause either severe local irritation or over-distension, but the cause is usually sought in temporary paralysis of a portion of the intestine. In the three, however, there is one condition common to all—viz., severe spasm of involuntary muscle; and in spite of the occasional abrasions which have been found in the lining membrane of the ureters, I believe that this muscular spasm should be regarded as the immediate cause of the pain. This view is further supported by the analogy of the pain of ordinary flatulent colic, and by the pains and after pains of labour, when the uterine contractions become exaggerated. Renal colic is undoubtedly the result of any attempt of a calculus to pass down a ureter of insufficient calibre, and it does not seem that the pain has any relation to the shape of the calculus or to the amount of local abrasion, but that it depends mainly on the amount of involuntary spasm which is excited by the presence and the size of the calculus. This contention is further supported by the result of treatment. In these cases it is customary to employ opium or morphine, and further relief is frequently afforded by a hot bath. The first doubtless relieves pain by its general anodyne action upon the nervous system and by blunting the sensibility it renders the condition less unendurable. The action of opium, however, extends also to the relaxation of muscular spasm, and in this action it is aided greatly by the influence of heat. Further, the pain travels downwards along the length of the ureter, and it frequently ceases almost entirely after the stone has passed into the bladder, the acute, agonising pain being followed merely by a dull aching, which gradually passes off. This last pain is, I believe, the result of irritation, while the acute pain is produced by muscular spasm.

Weymouth-street, W.

PLEURAL EFFUSION AND EMPYEMA.[1]

BY JAS. ALEX. LINDSAY, M.A., M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE BELFAST ROYAL HOSPITAL; CONSULTING PHYSICIAN, ULSTER HOSPITAL FOR WOMEN AND CHILDREN.

IT is with some hesitation that I undertake to direct the attention of the Ulster Medical Society to so familiar and well worn a subject as pleural effusion and empyema. I am encouraged to do so because the diseases in question, however familiar, possess a very exceptional clinical interest, and because there are many points in connexion, especially with their etiology and treatment, around which much controversy has raged, and still rages. I have a further reason for inviting attention to this topic—viz., that it is one which concerns and interests not only physicians but surgeons, and I rejoice that in the goodly array of speakers who are to follow me are to be found the names of several of my surgical colleagues. Permit me to say that I have given the subject special attention for several years, and that my opportunities for observation have been considerable. My remarks will be based mainly on a series of thirty-five cases, about which I possess full information. I have also partial records of a number of additional cases, bringing up the total to about fifty, and these partial records will be available for at least a portion of our inquiries. I can hardly hope that my facts will be new, but they will be at least facts, and not mere theories or book-work.

It will be obvious that to handle exhaustively so vast a subject as pleural effusion and empyema within the compass of a single paper would be altogether impossible. I shall therefore make no pretence of covering the entire ground, but shall select a number of points which seem to offer the best prospect of affording us something of interest and value. Without further preliminaries, therefore, I proceed to consider the first question which I have put down for discussion—viz., is simple pleural effusion commonly due to (*a*) exposure, (*b*) rheumatism, or (*c*) tubercle? In this country exposure has been usually regarded as a common and adequate cause of pleurisy. On the Continent, however, the tendency has been rather to regard the affection as due to some specific cause, either rheu-

[1] A paper read before the Ulster Medical Society.

matism, tubercle, pyæmia, or cancer. I have inquired into this point as carefully as possible, and from an analysis of thirty-five cases have obtained the following results. In sixteen cases, or nearly half the total number, there was a clear history of either a wetting or exposure to cold when the patient was heated and perspiring. Rheumatism was present in three cases, one of them being a case of rheumatic fever. There was a family history of tubercle in two cases, and in three cases the patient had suffered from hæmorrhage, probably of pulmonary origin. In ten cases, or nearly a third, no cause whatever could be assigned for the attack. None of my cases were either cancerous or pyæmic. That this question of etiology is a complicated one will appear from the fact that in one of my cases there was a clear family history of tubercle, the patient was rheumatic, and the onset of the pleuritic attack was attributed to exposure. On looking over the figures which I have just given, one is disposed to ask what value is to be assigned to the history of exposure and cold, to which patients in this country are so ready to attribute the most diverse ailments. With every desire to scrutinise critically such histories, I feel that the facts which point to exposure as a cause of pleurisy are too palpable to be overlooked and too numerous to be the result of mere coincidence. Not only were half of my cases attributed to this cause, but in many of them the history was precise and definite. In five cases the attack followed a severe wetting. In one case a lad, apparently quite healthy, slept upon a stone floor, and was immediately seized by acute pleurisy. In many of the remaining cases the patient was exposed to cold air when hot and perspiring. The argument that pleurisy cannot be due to simple exposure, inasmuch as other serous inflammations, such as peritonitis and pericarditis, are rarely, if ever, due to this cause, is entitled to some weight; but it might conceal a fallacy, as we are not entitled to assume that the various tissues of the body which are analogous in structure necessarily obey precisely the same pathological laws. It is, of course, open to us to assume that in many cases exposure is only the exciting cause, and that the predisposition, whether rheumatic, tubercular, or other, was there before. That this is sometimes the case is most likely, but the fact upon which I wish to insist, and which my records seem to warrant, is that in apparently healthy people exposure and cold are frequently followed by an attack of acute pleurisy.

As regards the influence of rheumatism, I have not found pleurisy specially frequent in rheumatic subjects. Of my thirty-five cases only one had had rheumatic fever, and only two of the remainder had symptoms of rheumatism. When we think of the great frequency of rheumatism in the north of Ireland, this number seems to afford only a slight foundation upon which to found a causal relation between the two diseases. Another test that may be employed is to inquire whether pleurisy and valvular disease of the heart are often associated. On looking over my cases I find that in no instance is the presence of heart disease recorded. On the whole, therefore, while I am not disposed to ignore the influence of rheumatism, I have no facts to indicate that it is a frequent cause of pleurisy, and the presumption seems the other way. The question of the influence of tuberculosis in the causation of acute pleurisy is a much more important and difficult one. Dr. Barrs of Leeds recently contributed an important paper to the *British Medical Journal* with the view of showing that a very large number of cases of simple pleural effusion are really of tubercular origin. He inquired into the after-history of seventy-four cases of simple pleural effusion, and found that within five years thirty-two of these were dead, twenty-five were living, and seventeen could not be traced. Of the thirty-two who were dead at the time of inquiry fourteen died of phthisis, four died of other tubercular affections, and several of the remainder succumbed to some pulmonary affection. Putting aside the cases that could not be traced, we have the startling fact that of a series of cases of simple pleural effusion apparently recovered from more than one-half died within five years, and that the majority died of some tuberculous disease. It is needless to point out that if these facts are fairly typical and should be corroborated by a wider experience, the ultimate prognosis in simple pleural effusion, so far from being, as it is now, commonly regarded distinctly favourable, would become most grave. My cases are unfortunately for the most part too recent to enable me to say much about their ultimate history, but they may nevertheless afford some guidance towards the elucidation of this very grave problem. Thus, of thirty-five cases there were only two instances of a family history of tubercle, and only three instances of pulmonary hæmorrhage. As to how many of the thirty-five cases were probably tubercular I should find it difficult to say precisely, many of the cases being still in progress, and in some the presence of tubercle being suspected, but not absolutely certain. My impression is that the association of tubercle and pleural effusion is commoner than we have been in the habit of believing, but my records would fall far short of warranting the very alarming conclusions of Dr. Barrs. The point which he has raised is one of extreme interest and importance, and it is to be hoped that it will be sifted to the very bottom. If a patient who has had an attack of acute pleurisy subsequently develops tuberculosis, the question arises whether the pleurisy was originally of a tubercular character. Dr. Barrs says that "he sees no reason to doubt that, if a pleuritic effusion is followed by phthisis, the effusion itself was in the first instance of a tuberculous origin." This does not seem to me to be a tenable position. All my knowledge of pulmonary phthisis inclines me to the belief that if a lung be left collapsed and inexpansile as the result of pleural effusion it is very likely to become the seat of tuberculosis, and that the development of tuberculosis under such circumstances is no proof that the underlying process was tubercular from the first. While the evidence at present at my disposal does not warrant the conclusion that ordinary pleural effusion is commonly followed by tuberculosis, I must admit that in dealing with the great number of cases of pulmonary phthisis which come under observation I have been more and more impressed by the frequency with which pleurisy is found as an antecedent condition. This is a fact which cannot be ignored, and of which the adherents of Dr. Barrs' doctrine are entitled to make the most.

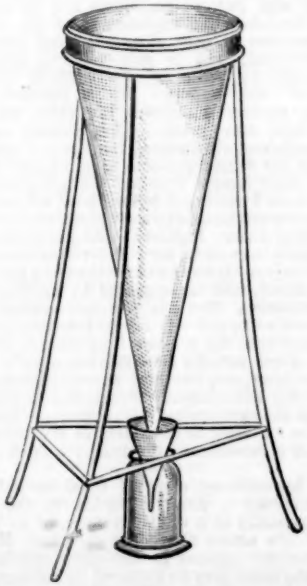
(To be concluded.)

THE FILTRATION OF URINE THROUGH EARTH.

BY F. B. WELLS, M.B. LOND.

I AM permitted by the kindness of Dr. Poore to place on record the results of a series of interesting experiments which have been made under his direction relating to the

FIG. 1.



slow filtration of urine through earth. A conical metal vessel, capable of containing about 40 lb. of dry earth,

and perforated at the apex, was used as a filter, and to this was added day by day an amount of urine averaging about half a pint. In the first three experiments, made between July, 1890, and February, 1891, fifty-nine separate analyses were made of the urine committed to the filters, involving the estimation of urea, sodium chloride, organic and mineral residues, and in subsequent experiments the averages of these analyses have been regarded as sufficiently accurate for purposes of comparison between urine and filtrate. The experiments are arranged in four divisions:—(1) Experiments made with mould from Gower-street; (2) experiments made with mould from Brondesbury; (3) experiments made with mould that had been previously used; (4) experiments made with the application of heat to the filter.

Of the first experiment, which has already been alluded to in a footnote to a presidential address delivered by Dr. Poore to the Sanitary Congress at Brighton, 1890, the following results were obtained. Two hundred ounces of urine were added to the filter, of which 73 ounces appeared as filtrate, the remaining 127 ounces representing what was lost by evaporation *plus* what remained in the filter. The average specific gravity of the urine was 1021·4, that of the filtrate 1011. The total solids of the urine averaged 4·44 grammes per cent, of which 3·45 per cent. were organic and 0·99 per cent. inorganic, while the total solids of the filtrate averaged 1·78 grammes per cent., of which 1·069 was organic and 0·710 inorganic. The chlorides in the urine averaged 1·09 grammes per cent., and in the filtrate 0·67 gramme per cent. The total solids of the urine added would be nearly 9 ounces, and the total solids of filtrate obtained about 1½ oz., so that 7⅞ oz. of solid residue were left in the filter. The appropriation of these 7⅞ oz. of residue by the filter will be again referred to.

The surface of the filter, when the nose was closely applied, smelt distinctly ammoniacal; but the filtrate, although of deep colour, could be evaporated to dryness without offensive smell. The filtrate showed no tendency to putrefy, nor did a few drops of it, added to sterilised urine in a tube, set up putrefaction. Next as to the experiments made with a different humus, and two of which were conducted in the garden at Brondesbury. I shall consider these two together, performed as they were with similar mould under similar conditions. In all 570 ounces of urine were added to the filters in equal additions of 10 ounces daily. Of this 228 ounces have been recovered as filtrate. The average specific gravity of the urine was 1020·3, and of the filtrate 1006. The urine contained an average 2·34 grammes per cent. of urea; the filtrate 0·15 gramme per cent., an amount which, allowing for possible error in the hypobromite method of estimation, may be disregarded. The average chlorides of the urine amounted to 1·35 grammes per cent., and of the filtrate to 0·33 gramme per cent., or of about 14 oz. (13·9) of urea added to the filter, 12½ (12·3) oz. did not appear in the filtrate, and of 8 oz. (8·03) of chloride added 6½ oz. (6·6) were unaccounted for. Nor do these results represent the best that have been obtained. Thus, in the last experiment made at Brondesbury, the first pint and a half of filtrate was almost colourless, of specific gravity 1003, chlorides 0·2 gramme per cent., and urea 0·13 gramme per cent.—an amount which, as already pointed out, may be disregarded.

None of the filtrates, after standing for weeks exposed to the air, underwent any putrefactive change, nor did any of them give off offensive smell when evaporated to dryness. In colour they have varied from the almost colourless filtrate above to a yellow or deep reddish-brown. In order to ascertain whether the colouring matter was of a urinary nature, part of the filtrate obtained from the first experiment was sent to Dr. MacMunn of Wolverhampton, who kindly examined it, and has furnished the following report of his examination:—

Colour.—A deep yellow, with orange tinge by gaslight, brownish tint by daylight.

Spectroscopic examination.—A layer 40 mm. deep absorbed a little of violet end of spectrum. No detached band in any depth. With HNO_3: No band; colour diminished. With H_2SO_4 in abundance: Colour almost discharged. By Jaffé's test (HCl and bleaching salt): Colour discharged. With NaHO: A precipitate carrying down all colouring matter; filtrate clear, showing no bands; some ammonia set free. With $NH_4OH + ZnCl_2$: Brownish precipitate; filtrate clear, and gives no fluorescence.

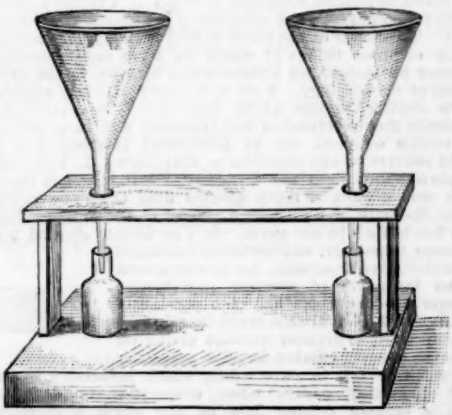
Result.—A total absence of normal urinary pigment and chromogen—that is, no urobilin, no indican, &c. The colour is probably due to the presence of some humus substance derived from the earth through which it has been filtered.

Now I will turn to the third group of experiments, those made with mould that had been previously used, an interval of five months having elapsed, during which the mould had remained intact. One hundred and nine ounces of urine were added, of average specific gravity 1024·3, with the following percentage analysis:—Urea, 2·6 grammes; chlorides, 1·2 grammes; residue, 5·48 grammes, being organic 4·12, mineral 1·35. Twenty-four ounces of filtrate were recaptured, of a uniform specific gravity 1035, with urea 0·2 gramme per cent. Thus the power of the filter to change the urea is as great as ever. Of chlorides there were 1·5 per cent., and residue 6·07 per cent., being organic 3·37 and mineral 2·70 per cent.—that is, the mineral residue of the filtrate is exactly double the amount of that in the urine; and it is evidently not due to chlorides, the respective average percentages being—urine, 1·2 grammes; filtrate 1·55 grammes. It seems probable that the 7⅞ oz. of residue left in the filter during the five months' interval has, to a great extent, nitrified and become soluble. Given an ammoniacal solution and garden soil, we have the readiest means of inducing nitrification. And, testing the filtrate qualitatively with ferrous sulphate and sulphuric acid, there is abundant evidence of the presence of nitrates. Experiments such as these—tedious, and extending over a long period—are necessarily incomplete, and it yet remains quantitatively to estimate the nitrates present.

[A new series of experiments has been instituted, in which this obvious omission will be rectified by a complete analysis of the mould at the beginning and end of the experiment.]

I shall refer but briefly to the experiments that have been made with the aid of heat roughly applied by means of a "Fletcher's burner" to the exterior of the filter, since these are, at present, the most incomplete of all the experiments made. The object has here been to maintain the mould at such a temperature as is best suited to the micro-organisms of the earth concerned in nitrification—a temperature of about 40° centigrade. In the first of these experiments, and the only one to which reference will be made, when seventy ounces of urine had been added, two ounces of filtrate were

FIG. 2.



obtained. This filtrate was of specific gravity 1002, contained no urea, and had a percentage residue of 0·54 gramme, being 0·34 organic and 0·2 mineral; 10 cubic centimetres of it yielded no appreciable evidence of chlorides. The average percentage analysis of the urine added was:—Urea, 2·2 grammes; chlorides, 1·4 grammes; residue, 4·9 grammes; of which 2·66 were organic and 1·24 mineral. Then from defect in the apparatus the mould became overheated and the filter inefficient.

[In the new series of experiments the earth will be maintained at (presumably) an optimum temperature by an incubator which has been specially constructed.]

It will be convenient here to describe an experiment that was made to ascertain what difference in results might obtain from a water and a urine filtration through mould. Two glass funnels were employed, each of capacity about four pints, and were filled with mould. To one was added during a period of twenty days, in regular amounts, an ounce and a half of tap water, and to the other an equal amount of urine. Rye grass seed was, moreover, sown on each filter surface. The water filter produced seven ounces and a half of filtrate, and developed an excellent crop of rye grass; the urine filter produced five ounces and a half of filtrate and no grass. The daily addition of *water* was followed, after the filtrate had once commenced to appear, by an almost *immediate* dropping of filtrate; *the urine tarried much longer in the mould.* That no grass would grow on the mould to which urine was being daily added was to be expected, ordinary urine being about twenty times too strong for plant culture. The filtrate obtained from the urine filter was odourless, clear, of pale yellow colour, specific gravity 1006, containing about 0·5 gramme per cent. of urea (? or other nitrogenous bodies), and yielding no offensive smell on evaporation to dryness. The water filtrate was of faint yellow colour, and of specific gravity 1000. Finally, a few experiments were made in which grass seed or plants were used in connexion with the mould from the filters. In May, 1891, a mixture of equal parts of mould that had been used for filtration, and one-half of which had moreover been sterilised by heat, was sent to Andover, and there twenty cuttings of common yellow calceolaria were placed in pots as follows: Ten in garden soil from the garden at Andover; ten in the London mould. The pots were placed in the open. Here is the result: In the ten pots of Andover soil the calceolarias had done fairly well, and each pot had grown an abundant crop of weeds. In the ten pots of London earth the calceolarias were all dead, and there was not a single weed visible. They were the embodiment of absolute barrenness. Corresponding portions of mould were used for urine filtration, and yielded a filtrate of specific gravity 1041, with a large percentage of urea. In no case has grass grown on the surface of a filter in use. But on mould that has remained for several months exposed to the light and air in the garden after usage in the filters grass has been cultivated most readily, yielding a better crop than that produced by unused mould.

Brondesbury, Oct., 1889.

Note by DR. POORE.—Although these experiments are manifestly incomplete in some particulars, I have advised Mr. Wells to publish them and to trust to a future opportunity for amplifying and completing the statements above made. The power of the earth to deal with organic matter is one of those things of which we have only recently obtained an insight, an insight which we owe to the new science of bacteriology. I am not aware that any experiments similar to the above have yet been published. Although the experiments are tentative and incomplete, the results obtained are of undoubted interest, and I would venture to call attention to four facts: 1. That the filtrate obtained from the filtration of urine through fresh earth was always a much thinner fluid than the urine added, the bulk of the solids dissolved in the urine having been left behind in the earth. 2. The filtrate showed no tendency to putrefy, and certainly contained no putrefactive organisms, for it was shown to be incapable of starting putrefactive changes in urine which had been previously sterilised. 3. The filtrate could in all cases be evaporated to dryness without giving off offensive odours, offering in this particular a great contrast to pure urine, which invariably emits most disgusting odours when evaporated to dryness. 4. The organic residue left in the earth apparently underwent nitrification in course of time, but it was noteworthy that earth which had been used for the filtration of relatively a very large amount of urine was in all cases barren until after it had been exposed to air and rain. After such exposure, however, its fertility appeared to be of a high order. The practical importance of this matter to sanitarians and agriculturists is very great. In London, with its 4,000,000 inhabitants, it is probable that 10,000,000 pints of urine are daily run to waste, and it must be remembered that these 10,000,000 pints contain about 200 tons weight of most valuable manure.

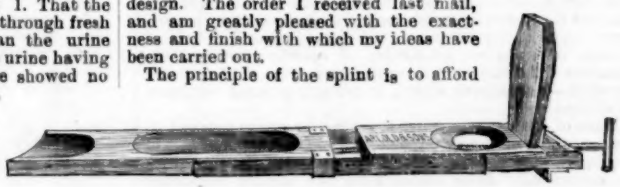
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TREATMENT OF FRACTURES OF TIBIA—MORE ESPECIALLY COMPOUND—BY MEANS OF SCREW EXTENSION.

BY G. R. MOORE GRAHAM, L.K.Q.C.P.I., &c.

SOME short time back I had occasion to be summoned to an accident that had occurred to a member of a travelling circus troupe, an acrobat named V. V——, who, whilst rehearsing previous to his evening performance, missed his hold on the trapeze and fell with great violence against the sharp edge of the stage, injuring, I was informed, his left leg. Upon making an examination I discovered that the left tibia had sustained a severe compound oblique fracture at the junction of the middle and lower thirds, and owing to the muscular development the upper fragment was considerably protruded through the skin. Chloroform having been administered, a reduction was made, and by means of the orthodox weight over the raised foot of the bed, sandbags, &c., I endeavoured to keep the fragments in apposition, but invariably with a negative result. As the condition of the patient and injured limb was anything but assuring, I felt it was necessary to adopt other means if the leg was to be saved, with the result that I designed the splint I am about to describe (see engraving), and had it roughly made by Japanese mechanics. Upon applying it I was gratified to find that the fragments, when once placed in apposition, never moved; also that the wound began to heal rapidly, and the patient expressed himself as greatly relieved and very comfortable, which satisfactory state of affairs continued. In three weeks' time the splint, having performed its duty, was removed; the wound had almost healed, and the fragments were well in position and uniting. The limb was put up in plaster-of-Paris, and the patient allowed to move about on crutches. In a short time he removed to Yokohama, where I am led to understand Dr. Stuart Eldridge, of that place, removed the plaster, and the wound not having quite healed he passed a probe and discovered a small piece of dead bone, which he removed, and which was shown to me at a later period. After this the wound healed entirely, and, according to latest accounts, the patient is following his usual occupation in India, and suffering no inconvenience. I might also state that, although a piece of necrosed bone came away, there was no shortening of the limb whatever. The original splint, roughly made, I sent to Messrs. Arnold and Sons, asking them to make the same according to the design. The order I received last mail, and am greatly pleased with the exactness and finish with which my ideas have been carried out.



The principle of the splint is to afford extension by means of a long screw fitted with a handle applied to the posterior surface of an ordinary leg-splint with foot piece, the splint being divided at the seat of fracture, as shown in the engraving; by means of the screw the divided segments are forced apart, and the power is so great that you can overcome the greatest amount of muscular contraction to a nicety. The splint being applied closed to the injured limb, the foot and lower fragment are securely bandaged to the lower segment of the splint, the upper fragment also being bandaged to the upper segment, the seat of fracture being left uncovered; by means of the handle the screw forces apart the divided splint and draws the fractured bone into place, which being accomplished, the limb is left with that amount of extension until the process of repair is nearly finished.

Another advantage is the facility with which, if the fracture is compound, the wound is dressed, causing no pain or discomfort to the patient and no inconvenience or trouble to the attendant, also no chance of the fragments becoming displaced. I trust that I have not infringed any existing rights, but plead ignorance and distance from the *fons et origo* of information if I have done so.

P.S.—I quote this case as one of several, but this being the first and worst treated by this splint.

Kobe, Japan.

GANGRENE OF LUNG FOLLOWING PNEUMONIA IN A CHILD TWENTY-ONE MONTHS OLD.

By WALTER B. DE JERSEY, B.A., M.B, B.C. CANTAB.,
SENIOR RESIDENT MEDICAL OFFICER, EVELINA HOSPITAL FOR SICK CHILDREN.

H. S——, aged twenty-one months, was admitted into the Evelina Hospital for Sick Children on Nov. 3rd, 1891, under the care of Dr. Frederick Taylor, to whom I am indebted for permission to publish the case. There was a history of phthisis on both sides of the family. The infant was fat and healthy till its present illness, eight weeks previous to admission, when he first became feverish. A week later he was seen by a doctor, who said he had bronchitis, and ordered poultices to the chest. Five weeks before admission the patient became much worse, with severe dyspnœa, loss of appetite, and fever. Bowels confined. Child apathetic.—Oct. 30th: Lips blue, face of a "yellowish white colour," and cough severe; alæ nasi working; no expectoration appeared externally; no fetor of breath noticed. On admission a fairly well nourished child; face pale; alæ nasi working; no herpes. Temperature 101·6° F.; pulse 146; respiration 36. Markedly rachitic; mouth and throat healthy; tongue furred; breath not offensive. Wooden dulness over the whole of the left chest, except near spine, where there was rather more resonance. Blowing breathing in front from apex to nipple, and behind down to middle of scapula; only very faint distant breath sounds elsewhere; no crepitations or moist sounds. On right side a few fine crepitations at base, otherwise healthy. Heart sounds normal, apex beat not displaced. Nothing abnormal in abdomen. The left side of chest a quarter of an inch larger than right. An exploring needle was inserted into the left chest, first, in the sixth space in the mid-axillary line; second, in the sixth space external to the angle of the scapula. In each case pus was withdrawn, but in neither could a syringeful be obtained. Considering the physical signs and the pus obtained a sufficient warrant, I made (in Dr. Taylor's absence) an incision in the sixth space between the post- and mid-axillary lines. About a drachm of pus escaped with an extremely fetid odour; on inserting the finger between the ribs soft friable lung, which easily broke down, could be felt. The temperature gradually fell after the operation to 98° F.; pulse 124; respiration 36.—Nov. 4th: Child looking very ill. Pulse 130, weak; respiration 50; temperature 103° F. Dressed; thin brown discharge, very offensive odour. — 5th: Face pale, child apathetic all day; some diarrhœa and vomiting, both very offensive. Dressed; discharge as before. Dulness wooden over the whole of the left lung. No breath sounds heard.—6th: Temperature rose all day after being down yesterday; vomiting less; no diarrhœa; child restless till this evening; dying quietly at 6.30 P.M. Breath for the last forty-eight hours very offensive. Treatment, quinine and stimulants.

Necropsy, thirty-one hours after death.—Left lung solid, tubes widely dilated and thickened, containing a large amount of pus. Scattered patches of gangrene all over lung, the whole very fetid. Pleura adherent firmly all over. Some bronchitis in right lung; nothing else abnormal in any part of the body. No tubercles found anywhere.

Remarks.—The above case is interesting on two grounds: first, the fact of gangrene of lung occurring in so young a child after what was in all probability pneumonia; second, the difficulty in the diagnosis. At the post-mortem examination no disease of the heart or any of its valves was present, and there were no clots, ante- or post-mortem, in any of its chambers. The pulmonary artery and its branches showed no signs of plugging. The cause of the condition cannot then be put down to simple embolism; again, septic embolism may likewise be dismissed, no disease of ear or any other septic origin being found. Though the bronchial tubes were much dilated, none of them showed any ulceration in their interior; all, however, having their walls much infiltrated. It is usual to find in pneumonia and broncho-pneumonia in children thickening of the tubes and septa to a greater or less degree, the inflammation affecting not only the alveoli, but also the interalveolar tissue and the tubes. An acute inflammation would then account for this thickening, and the dilatation of the tubes would easily occur in their softened condition by the efforts of expiration and inspiration, and by coughing; the lung itself, unable to withstand the acute attack so widely spread, becoming gangrenous. Though very disorganised, there was little doubt, on careful examination, that the lung had been in a pneumonic condition previously. With reference to the difficulty of diagnosis, all the signs of fluid were present except displacement of heart. It was found post-mortem that a needle would have withdrawn pus from the tubes at almost any point on the left side at which it was inserted.

Southwark-bridge-road, S.E.

ENTERIC FEVER IN A CHILD FOUR MONTHS AND A HALF OLD.

By JOHN G. OGLE, M.B.

IN connexion with the case recorded by Dr. Fuller in THE LANCET of Nov. 7th, the following notes will be interesting:—

The body of Metha Amanda D——, aged four months and fourteen days, was brought to St. Bartholomew's Hospital on Sept. 17th, 1889, death having taken place on the way to the hospital. The history elicited from the mother at the inquest was as follows:—The child, one of twins, had been healthy from birth. She had been fed on condensed milk. On Sept. 11th she was vaccinated, and since then had been vomiting, but did not appear to be ill. On Sept. 17th the mother went to her work in the morning, leaving the child, apparently well, in the charge of a friend; in the evening, on her return, the child was in the mortuary at St. Bartholomew's Hospital. The friend stated that on the morning of the 17th the child was very fretful and vomited frequently; she got worse in the afternoon, and died on the way to the hospital. The bowels acted on the 17th, and the motion was solid and lemon-coloured.

Post-mortem Examination.—The body was fairly nourished, but there were marked evidences of rickets. No signs of violence were found. The vertex of the brain was somewhat ecchymosed, and the left lateral ventricle contained a considerable excess of fluid. The intestines presented the appearances typical of enteric fever. The Peyer's patches were swollen and reticulated, and many of them, especially in the lower part of the ileum, were converted into ragged ulcers. The first ulcer occurred about twenty-four inches from the stomach, and they were of circular shape, and about four inches apart in the jejunum. In the ileum the ulcers were much more numerous, and assumed an oval form, with the long axis in the long axis of the intestine. The mucous membrane of the colon was covered with minute inflamed solitary glands, which were ulcerated in the ascending portion. There was no peritonitis or perforation. The stomach was empty and the mucous membrane healthy. The mesenteric glands were enlarged. The spleen was large and soft. Murchison makes mention of three cases in younger infants—viz., eight days old, fifteen days old, and in a fœtus of seven months.

Oxford.

FRACTURE OF THE NASAL SEPTUM.

By W. T. CLEGG, L.R.C.P. & M.R.C.S.

DURING the past year two cases of this injury have come under my notice. In both the cartilage of the septum was displaced so as to occlude the left nostril. Both complained that the right ala nasi being unsupported fell in when an inspiration was taken with the mouth closed, and acted like a valve, making nasal breathing an impossibility. It was to remedy this that both patients consulted me. Now all mention of this is omitted in articles treating the subject, yet it is the principal difficulty to be dealt with. In the first case, by making four cross cuts through the cartilage eight triangles were formed, and these were separately fractured at their base. The septum could then be pushed into place, and the nostril plugged to support it. At the end of three weeks the result was perfect. I have lost sight of the patient since, and so cannot say whether the good result was permanent, but I have no reason to doubt it. The second case has not yet come up for treatment.

Liverpool

A CASE OF ACUTE ORCHITIS FOLLOWING INFLUENZA.

BY J. W. HARRIS, L.R.C.P. LOND., M.R.C.S., &c.

THE following case may be of interest during the present epidemic of influenza:—

On Nov. 26th I was called to see a man, G—— W——, aged sixty-seven, a widower. He was complaining of "pains all over," more especially in the back, head, and back of eyes. Slight cough. Temperature 103·2°; pulse 120. Tongue slightly furred; bowels open. I gave him twenty grains of salicylate of soda every four hours, and he gradually lost his fever and pain. On Dec. 1st, on visiting him, I found him complaining of pain, tenderness, heat, swelling, and redness of the left testicle. Temperature 102°. I gave him an aperient and a saline mixture, with one grain of potassio-tartrate of antimony, every four hours, and he gradually recovered, and on Dec. 21st he was down stairs.

There being an epidemic of the so-called "influenza" in the town, I looked upon this case of one of acute orchitis following influenza. As the patient never got out of bed, had no trouble with his urine, and could account for the swelling in no way, and orchitis coming on as it does after mumps (metastasis), the case seems to me somewhat obscure. I should be glad to know if any of the readers of THE LANCET have met with a similar one.

Cranbrook, Kent.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL

FIFTY CONSECUTIVE MAJOR AMPUTATIONS.

(Under the care of Mr. A. E. BARKER.)

THE following fifty consecutive major amputations are here tabulated as a small contribution to the statistics of a very interesting subject. They form an unbroken series, no amputation performed by Mr. Barker since 1876 being omitted except those smaller operations for the removal of parts of the hand and foot below the wrist-joint and tarsus, all of which did well.

Double amputations, of which there were three, are entered as one operation. One patient required reamputation in the thigh, after removal of the leg two years before, for gangrene, due to alcoholic arteritis. These two operations are counted separately. In one amputation in the middle of the thigh, the rest of the femur up to its head was subsequently removed by a separate operation, making this case practically one of exarticulation at the hip. This is only put down as one case.

	Position in thirds.		Disease. Recov.	Disease. Died.	Injury. Recov. Prim.	Injury. Recov. Sec.	Injury. Died.
Thigh	Upper	1	....	—	....	—	1	—
	Middle	2	....	2	—	....	—	—	—
	Lower	12	....	9	1	....	3	—	1
Knee-joint		1	....	1	—	....	—	—	—
Leg	Upper	2	....	2	—	....	—	—	—
	Middle	6	....	3	—	....	3	—	—
	Lower	2	....	—	—	....	2	—	—
Ankle-joint	Syme	4	....	3	—	....	1	—	—
	Pirogoff	3	....	1	—	....	2	—	—
Shoulder-joint		1	....	1	1	....	—	—	—
Arm	Upper	—	....	—	—	....	—	—	—
	Middle	3	....	—	—	....	2	1	—
	Lower	2	....	—	—	....	2	—	—
Elbow-joint		1	....	—	—	....	1	—	—
Forearm	Upper	—	....	—	—	....	—	—	—
	Middle	1	....	—	—	....	1	—	—
	Lower	7	....	4	1	....	2	1	—
Wrist-joint		2	....	—	—	....	1	1	—
Total		50	....	26	3	....	20	4	1

From this table it will be seen that forty-six patients recovered from operation and four died.

CASES 3, 19, 30, and 49.—The cause of death in each was as follows:—

CASE 3.—A man aged forty-two had tubercular abscesses about the wrist-joint for four months, with sinuses, and was greatly broken down in health. An attempt to excise the wrist failed, and a fortnight later amputation was performed in the lower third of the forearm. The wound showed feeble power of healing and the lungs were evidently affected with tubercle. He died of asthenia due to pulmonary tuberculosis on the twenty-first day. At the post-mortem examination there were twenty-four ounces of bloody serum in the left pleura; the right lung contained an enormous cavity, with surrounding tubercular consolidation; in the left lung there was tubercular consolidation of all the upper lobe, with a few moist cavities.

CASE 19 was that of a man aged twenty-eight, whose legs had been run over on the railway, the right being crushed to pulp up to the middle of the leg, the left nearly to the knee. Double amputation through thigh and below knee followed two hours and a half after the accident. Soon after the pulse became very feeble and frequent, and the patient steadily sank and died forty hours later of shock. The temperature after operation was 96°; then only rose to 98·6°, and then fell, until just before death it was 97·6°. At the post-mortem examination nothing special was found, except slight "fat embolism" in the lung.

CASE 30 was amputated above the knee for epithelioma of the leg. After the first week the patient did not do well. He said he had for a long time been subject to gout, and he had after the operation attacks like gout in the stump, which showed little power of repair. The temperature was usually below 100°, but touched 101·8° on two or three occasions. In the fourth week he began to fail, and he died of asthenia on the twenty-ninth day after the operation. There was a suspicion of trismus not long before death.

CASE 49 was that of a lad of eighteen in the last stage of exhaustion. He had more than a year before had acute necrosis of the left femur, which resulted in large open abscesses. Amputation was urged, but refused, and these abscesses continued to discharge freely up to the last. Eleven months after the first he had a second attack of acute necrosis, this time in the right shoulder, with suppuration along the whole humerus, large abscesses, and great prostration. Later the head of the humerus came away with profuse suppuration. Amputation was proposed, and was refused for a considerable time. Then amputation was agreed to, but the patient was too weak to bear it, and it was put off. Finally he was thought to have improved a very little, and the soft parts were simply divided which held the wasted arm to the shoulder. Little or no blood was lost, and all was rapidly and simply done. He was dressed daily, and the wound cleaned. He gained some strength for the first week, then he began to fail again. Another large abscess formed over the scapula. He died of asthenia on the seventeenth day after amputation

Of these four deaths, only one at the most can be credited directly to the operation. Cases 3 and 49 plainly died from the exhaustion of the disease for which the amputations had been done three weeks before. The operations were only undertaken as their last chance, and, at any rate, to rid them of limbs which were practically rotting away. Case 19 plainly died of the shock of a terrible railway injury which carried away both his legs. But death in Case 30 may fairly be credited to the operation itself, though the cause of the gradual failure afterwards was always obscure. Possibly more judgment would have been shown in leaving Cases 3 and 49 alone as too far gone to be saved. But, on the other hand, the surgeon is anxious to relieve a patient, even in advanced phthisis, of a member which is a source of untold suffering, if it can be done by so simple a procedure as amputation above the wrist; or, again, if the arm is only hanging on to the shoulder by some thin strips of tissue it seems cruel not to remove the rotting mass below by a few strokes of a scalpel if the patient can bear a few minutes under chloroform. On these grounds the two cases were treated, but the original disease carried them off some weeks later.

If we assume that only one of the four died of the effects of operation the mortality on the whole series is brought very low indeed. Two per cent. of deaths in a series which contain over 30 per cent. of amputations above the knee and three or four double amputations is a decided advance on earlier times. But this is not the only improvement. The

mode in which a large number of this series of amputations have healed shows too how we are advancing. Many cases, more especially the latest, have healed absolutely in a week or ten days under one dressing and without any drainage of any kind, the temperature remaining normal all the time. Suppuration, with high temperature of course occurred in several cases, especially among the earlier ones. This is only to be expected where all kinds of injuries and disease are treated by amputation close to the damaged part. But suppuration was not very serious in any case. Other unfavourable sequelæ of amputation were very rarely seen. Secondary hæmorrhage occurred in one case only; necrosis, to a very small extent, of the end of the bone occurred in one case under observation, and to a large extent in another case, months after the patient had left the hospital with a sinus. This sequestrum was removed at another hospital. Perhaps slight exfoliation occurred in a third case There is no note of it in the registrar's record, but Mr. Barker has some recollection of seeing the woman as an out-patient, and removing a flake of bone from a sinus. In one case the portion of the os calcis left in the flap of a Pirogoff's amputation had to be removed on the seventeenth day as suppuration had loosened it.

One of the most troublesome sequelæ of the operation chiefly seen among the earlier cases was carbolic intoxication with fever and irritation of the skin. This is not noted among the last half or so of the series, which were mostly treated with dry dressings. It is highly probable that the blush seen in the only case set down as affected with erysipelas was in reality nothing but a carbolic rash. In this case a slight blush appeared about the knee on the ninth day after a Pirogoff's amputation, and in the notes we find "carboluria" on the eighth day. Pyæmia and septicæmia were never seen among the whole series. Erysipelas is noted in the registrar's record as present in one case, that just alluded to. In another case a rash appeared on the buttock where the thigh had been amputated. This was not regarded by the registrar as erysipelatous, and is not entered in the notes as such. It is just possible that it may have been, but the patient's general condition was excellent throughout except for high temperature. It may also have been a carbolic rash.

The dressings employed in this series were as follows:—In the first ten cases the spray was used and the old carbolic gauze was packed round the stump as usual. In the next fifteen or so of cases carbolic oil on lint was the usual application to the wound after careful washing with carbolic lotion. This lint was supported by an abundant packing of wool. The last twenty-five or so of cases were put up in one or other form of dry antiseptic dressing with or without drainage, the dressing in almost every case being salicylic wool, the sutures silk, latterly exclusively so. This last dressing has given by far the best results, such amputations through knee-joint and thigh in several cases healing perfectly under the first dressing without any drainage. There were twenty-six amputations for disease, with three deaths, and twenty-four for injury, with one death.

Remarks, by Mr. BARKER.—So much has been said and written of late about the insanitary state of our large metropolitan hospitals and the consequent high mortality of the major operations performed in them, that it is pleasant as well as important to record anything which may show such a charge to be unfounded at the present day. Amputations have usually been considered a fair test of hospital efficiency. If I, during my first fifteen years of duty at one of our busiest institutions, and dealing with cases of all kinds, the healthy with the unhealthy, the temperate with the drunken and dissolute, without any special selection, have only had at the very highest a mortality on my major amputations of 8 per cent., such a charge against general hospitals is certainly not justified. But if, as is shown by a study of the above, the real mortality from these operations themselves is, strictly speaking, only 2 per cent., it may be claimed that no institution for the reception of the sick, whether private "nursing home" or special public hospital, can show much better results. The careful study of these fifty cases has been most useful and instructive to me. The errors committed in my earlier cases have been seen to disappear one by one in the latter part of the series, and in such a way as to justify the hope that when my next series of fifty major amputations of limbs is completed, it may show a still further improvement upon the older methods. This improvement will be based on greater judgment in the exclusion of hopeless cases, a sounder knowledge of the conditions which govern the repair of wounds, and greater skill in the carrying out of the details of treatment which promote the latter.

RADCLIFFE INFIRMARY, OXFORD.

INTERESTING SURGICAL CASES RECENTLY UNDER TREATMENT IN THE WARDS.

(Under the care of Mr. H. P. SYMONDS.)

IT is interesting to note with regard to this case the short duration of the discharge from the ear before the more serious symptoms developed which led to the performance of the operation; also the apparent absence at both operations of any lesion sufficient to account for the symptoms, and the great relief afforded by the operations. There does not appear to have been sufficient proof forthcoming that the abscess in the neck was dependent on a suppurating thrombus of the internal jugular vein, which again is negatived by the absence of important symptoms. We published last year two cases which may be read with advantage in connexion with this case.[1] Case 2 is an example of the successful removal of a fibroid uterus after abdominal section and the extra-peritoneal treatment of the pedicle. As we recently pointed out, this method is the one which has been found to give the best results when it is necessary to perform extirpation for this disease.[2] Case 3: There can be no question of the propriety of surgical interference in this case, the presence of pus, with the duration of the case, making operation imperative. The occurrence of localised suppuration in perityphlitis is seen in a very small percentage of the patients applying for treatment in our hospitals, and it is not often that the appendix is so readily seen and treated as it was at this operation. For the following notes we are indebted to Mr. W. J. Turrell, M.B. Oxon.

Trephining Right Lateral Sinus.—W. H——, aged thirty-eight, was admitted on Feb. 2nd, 1891, said to have been ill eleven weeks with influenza and acute tonsillitis. For the last three weeks he had been much worse, suffering from intense cephalalgia. During the past week he had been delirious, but not violent. He had a discharge from his ear for a fortnight before admission, and had had his membrana tympani incised by Mr. Maisey of Charlbury. On admission, he was delirious, but not violent, the delirium being of an active muttering type. There were no localising symptoms of any cranial suppuration. No facial paralysis, no strabismus, the pupils were equal and reacted to light. Knee-jerks normal. Temperature 100° F. There was a red fluctuating swelling on the right side of the neck in the line of the internal jugular vein. On the night of admission, the patient being under the influence of methylene, Mr. Symonds trephined the lateral sinus on the right side with a half-inch trephine; no pus exuded, but there was a flow of dark venous blood, which was readily arrested by plugging with iodoform gauze. The abscess in line with the internal jugular vein was afterwards opened. The wounds rapidly healed, but no improvement took place in the patient's mental condition; on the contrary, he became violent, and had to be quieted by hypodermic injections of hyoscine, 1-150th to 1-100th of a grain. These injections never failed to induce sleep, and on awakening the patient was always more rational. He lost flesh rather rapidly and became very much weaker. On Feb. 24th he seemed rather better, took his food well, and was sensible for most of the day. On the 25th the patient was put under the influence of chloroform, and Mr. Symonds gouged through the lower part of the mastoid process, but did not find any pus. After this operation the patient was quite rational, took his food well, and gave no trouble. On March 2nd he was moved into the general ward. On the 7th another abscess was noticed behind the right angle of the jaw. This was opened on the following day, and was found to be very deeply situated; counter-opening was required, and a drainage-tube inserted. The patient continued to be perfectly rational, took his food well, and rapidly put on flesh. He was discharged on March 25th cured, with the exception of a superficial granulating wound behind the right ear. Since leaving he has twice been up to the hospital in perfect health.

[1] THE LANCET, vol. ii., p. 231, Mr. Page.
[2] Ibid., p. 1335.

Hysterectomy.—Frances H——, aged thirty-seven, was admitted on Jan. 28th suffering from a fibroid tumour of the uterus, which caused increased flow of blood at the catamenial periods and considerable pain and discomfort. She first noticed the swelling in June, 1890, after her last confinement, which was a difficult one, the child being stillborn. She had been in the hospital in the autumn, but was then unwilling to undergo the proposed operation of oöphorectomy. On Feb. 3rd, the patient being under the influence of ether, Mr. Symonds made an incision about three inches long between the umbilicus and pubes in the middle line, and opened the peritoneum in the usual way; a small quantity of peritoneal fluid escaped. The tumour at once presented at the lower part of the wound, covered at the upper part by intestines; it was of irregular outline, its surface being studded with several small, very vascular, pedunculated fibroids. It was about the size of a double fist. Mr. Symonds first removed both ovaries and then determined to remove the uterus, which he did by dragging it out of the wound, applying a Koeberlé's serre-nœud round its base, inserting two Koeberlé's needles beneath the wire and then excising the mass, including uterus and fibroid. The peritoneum and edges of the wound were brought together round the stump, and a dressing of boracic powder and sal alembroth gauze applied. The duration of the operation was seventy minutes, and was followed by no marked collapse. On coming round from the anæsthetic the patient complained of great pain in her abdomen, which was relieved by one-sixth of a grain of morphia given hypodermically.

On Feb. 4th she had a good night, with five hours' sleep. Evening temperature 101·2°. On the second day after the operation the clamp was tightened half a turn, on the third day one turn. On the fifth day the wound was partially dressed, the deep dressing being powdered with boracic powder but not removed. On the sixth day (Feb. 9th) a little pleurisy developed on the right side; the ribs were strapped. On the seventh day the clamp was tightened one turn. On the eighth day it was tightened two turns. On the ninth day (Feb. 12th) the wound, when dressed for the first time, appeared quite healthy. The clamp was tightened one turn twice daily. On the twelfth day (Feb. 15th) it was screwed up to the end. On the thirteenth day (Feb. 16th) the clamp was removed. On the fifteenth day (Feb. 18th) iron sulphate was dusted on the stump. On the sixteenth day the wound was dressed, a large slough cut away, and one of Koeberlé's needles removed. Wound dressed daily. The remaining needle was removed on Feb. 22nd (nineteenth day).

The wound gradually healed up from the bottom and she was discharged cured on March 28th. Since her discharge the patient has been up to the hospital several times, and is now in very good health and able to perform her household duties.

Perityphlitis: Excision of Vermiform Appendix.—A. M——, aged twelve, a well-nourished healthy-looking boy, was admitted on June 16th suffering from perityphlitis. He was quite well on Sunday, June 7th, but on the 8th thinks that he caught cold. On June 10th the patient first felt a darting pain in the right iliac fossa, and noticed a hard swelling there. It was then as big as when he was admitted. The pain was very severe, and kept him awake at night. On Sunday, June 14th, he saw Dr. Barnes of Wheatley, who sent him to this hospital.—June 17th: He did not sleep well last night, and the temperature was 101·4°. This morning 99°, lies quietly in bed, and does not appear to be in much pain. Tongue coated with white fur. There was a hard-tender swelling in the right iliac fossa, but the skin was not red. Pulse 96, low tension, regular; respiration 28, shallow. Bowels not open since admission.

June 18th (morning).—The patient seems much better to-day. The fullness in the right iliac fossa seems less, there is no redness of the skin, and no fluctuation, but it is very tender. He was very constipated, enemata bringing away large fæcal masses. After a consultation at twelve, the patient was anæsthetised and Mr. Symonds, as soon as the patient was fully under, obtained distinct fluctuation. He then made a slightly oblique incision, about two inches and a half long, commencing at the level of the anterior superior iliac spine, one inch and a half internal to it, going downwards and slightly inwards. Upon deepening the incision a quantity of very offensive pus of a dark greenish colour poured forth. Mr. Symonds without difficulty found the vermiform appendix, and seized the extremity of it with pressure forceps, which at once tore away owing to the rotten condition of the tissues. The forceps were then applied higher up, and above them an annular ligature was applied round the appendix, and the ends of the ligature being left long to hold by, the portion of the appendix beyond the ligature was removed. Two chromic gut sutures were next inserted above the annular ligature through the wall of the appendix one on either side, and after they had been separated in the usual manner their ends were tied together so as to form a "purse suture." The cavity was thoroughly douched out with boracic acid lotion, iodoform dusted over, and the wound plugged with iodoform gauze. The excised portion was found on examination to contain a well-marked ulcer, with a perforation about its centre.

The discharges came through the dressing the night of the operation, and the temperature rose to 100°. The wound was redressed with iodoform gauze. On the next day the patient said that he felt much better, and entirely free from pain. Temperature normal. The patient made an uninterrupted recovery; the wound was repacked nearly every day to ensure its healing from the bottom. There was no further rise of temperature. Bowels acted regularly. Patient was up at the end of a fortnight, and was discharged cured on July 18th, with the wound healed.

Medical Societies.

LONDON EPIDEMIOLOGICAL SOCIETY.

Famine and Disease.

A MEETING of this Society was held on Wednesday, Dec. 16th, Dr. J. Ewart, President, in the chair.

Sir WILLIAM MOORE, K.C.I.E., Q.H.P., read a paper on Famine. He commenced by mentioning some of the principal causes of famine, and remarked that he did not agree with what had been said by Mr. Danvers of the India Office, in his report on Famines in India—viz., that failure of the rains was not the usual cause. Want of means of communication intensifies famine. There may be plenty in one district and famine in another. When the rains fail the grass disappears and the water dries up, so that beasts of burden cannot be used to convey food to the people. This was sorely felt in the Rajpootana famine, as there was then no railway and not a good road throughout the country. The people therefore emigrated in search of food, passing in great streams to the north into the Punjaub, to the south to the Bombay Presidency, towards the west to the Indus, and east over the Aravelli mountains into Malwa and Central India. From the principality of Malwa alone it is estimated that one million of people emigrated, taking with them one and a half million of cattle. The anti-opiumists had said that the extending cultivation of opium in Malwa had caused the famine in the neighbouring province of Rajpootana. But the fact was that tens of thousands of human beings, and more cattle, found food in the opium growing province of Malwa. As war has its "couine" of famine, so famine has its result of disease. Ovid had vividly described famine, and Sir William Moore had seen the famine-stricken, emaciated, digging for roots and dying, as Ovid had described hundreds of years ago. The first result of famine was anæmia, which was combined with a peculiar apathy which prevented the famine-stricken caring for work. Sympathy with the famine-stricken had been diminished because it was found the people suffering from starvation would not work. This was the result of the ill-nourished brain, and of the constitutional apathy and belief in *nusseeb*, or fate, common to most orientals. But it was intensified by starvation, and the starving ought not to be blamed for their apathy more than they should be blamed for any other disease which starvation produces. Bowel complaint soon attacks the famine-stricken. This is especially the case in India, because the people there are from climate very liable to bowel complaints. Post-mortem examination had shown that changes of a fatty nature in the intestines resulted from starvation. But the primary cause of the bowel complaint was generally the articles the people used as food. These had been investigated by Sir W. Moore and Dr. G. King in Rajpootana, and

a list was published by the Government of India in one of Sir W. Moore's reports. In the Bombay Presidency the famine foods had been investigated by Brigade-Surgeons Gray and Lyon, and in the Madras Presidency by Dr. Shortt. They were barks and roots of trees, seeds of grapes, seeds of trees, wild fruits, the stalks of the American aloe, stalks of rushes, the refuse of *till* seeds after oil had been expressed, lizards, locusts, and various other things. During a famine, and especially after a famine, when the next rains set in, there is always an enormous increase of fever. The type of the fever varies in different countries and climates. After the Irish famine it was typhus fever. During and after the Rajasthan famine it was malarious. During the Bombay famine it was diagnosed as relapsing because the *spirillum Obermeiri* had been found in the blood of some of the sufferers. But if it is correct that relapsing fever depends upon the spirillum, it must be an infectious fever, and therefore was not caused by famine. The subject was important because it had been said the spirillum signified relapsing fever, and relapsing fever signified that the people were being allowed to die from want of food. It is questionable whether relapsing fever is a famine disease, for although it has sometimes prevailed when there was famine, famine has often occurred without relapsing fever. All fevers in the tropics have a tendency to assume the relapsing type—so much so that Dr. Lyon of the Bengal Service wrote a book, endeavouring to prove that all fevers are relapsing. Scurvy was very prevalent during famines; so was, as Sir William Moore regarded it, the allied disease beri-beri. He had seen a great deal of beri-beri, and had elsewhere given reasons for regarding it as a phase of scurvy. Others, however, have "gone in" for a beri-beri microbe, but have failed to explain why the microbe comes only, or at least chiefly, when certain environments prevail. During famines beri-beri often assumes the general œdematous form. But in one season of scarcity coming under the lecturer's cognisance serous effusion was limited to the abdomen, and numbers of famine people were tapped. Skin diseases become more common during famine. So does *yeenash*, or maggots in the nose, for, there being so much human and animal offal, more than the ordinary number of flies are bred. It was remarked during the Indian famine that neither beasts nor birds of prey looked healthy, and this was attributable to repeated surfeits of flesh, for one could scarcely go a mile through the country without meeting with half-devoured carcases. Many Indian officers had great experience in the conduct of famines, which was no easy matter. It seemed easy enough to establish a famine camp and to set the people to work on a road or tank, or at some other labour. But there was the sanitation and police of the famine camp, the provision for the sick, the convoy of food, the means by which it should be given to the people, the shelter of the masses, the care of the sick. Then there was the care of the numbers of sick, aged, infirm, and children, who were unable to leave their villages for any work. Various popular impressions had to be combated. One was that if a person could take food he did not die of starvation. During the Madras famine, Surgeon-General Cornish, C.I.E., who was then Sanitary Commissioner for the Madras Presidency, was obliged to point out this, and to insist that although a person took food yesterday, that was no reason why he did not die of starvation to-day; for there are two kinds of starvation—acute and chronic. Therefore the official relief of famine should not be delayed too long. Another delusion was that one pound of grain was sufficient to support a working man. This was also successfully combated by Surgeon-General Cornish. As a matter of fact, natives of India eat usually nearer 2lb. of grain per diem rather than 1lb., besides condiments. Another idea was that so long as the person got his allowance of grain it did not much matter what that grain was. But grains vary in nutritive properties, and feeding people who habitually take rice on bajree, or the reverse, is quite enough to produce bowel complaint. Most Anglo-Indians know if they change their horses' grain suddenly the horse will probably get "gripes." Sir W. Moore then mentioned the dietary which had been proposed by Brigade-Surgeon Lyon, the chemical analyst to the Government of Bombay. A question which arises is whether the people should be fed by doles of grain or should be given money to purchase grain. It had been found that when money was given prices had a tendency to rise; also that the money was not always spent in the most desirable manner. On the other hand, purchasers of large quantities of grain by the authorities disorganised trade, and grain could not be purchased so cheaply or conveyed so cheaply by the authorities as by the grain merchants. It was desirable that local conditions and circumstances should determine this. As regards prevention of famine, Sir W. Moore said that better cultivation and more of it was necessary. We could not, except to a certain problematical extent, control the elements, but at least we could store water. There were more than 18,000 miles of irrigation canals in India; but there were large tracts where there were no rivers for the extension of irrigation canals. These parts wanted more wells. And in hilly countries more storage and irrigation tanks were required. Forest conservancy was also a necessity, for by forest conservancy more rain would be solicited, and what fell would be prevented flowing away rather than soaking into the earth. More railways were also required. At present in India there were only some 18,000 miles of railway open. The problematical control of the elements mentioned above was rain making, of which we had heard much of late. If there were clouds, probably the compression produced by an explosion of dynamite might cause vapour to condense into water. But when there were no clouds, the moisture in the air would not be sufficient. There had no doubt been mistakes in dealing with famine in India; but such mistakes were nothing to those which apparently had been made in Russia. The authorities there did not seem able to carry out the orders of the Czar, and the grain had got into the hands of middlemen. It was also reported that Russian officials were generally corrupt. Now the Government of India had declared that if it were possible to prevent it no person should be allowed to die from want of food; and when famine was once recognised the local administrations and the local officials had nobly striven to carry out the orders of the Government of India. And as a rule they had succeeded, for the officials were English gentlemen, supplemented by Indian gentlemen whose one sole desire was to save the lives of the people. In this country during time of war safety from famine would depend on naval supremacy, for if the import of food were stopped, or materially interfered with, there would be much want, the agricultural resources not being sufficient for the large population.

In the discussion which ensued the President, Inspector-General Lawson, Surgeon-Major Hendley, Dr. Murray Thompson, and Dr. Bulstrode took part.

HUNTERIAN SOCIETY.

Ruptured Aortic Valve.—Tuberculosis with Addison's Disease.—Recurrent Papillary Sarcoma.—Exfoliative Dermatitis.—Phosphorus Necrosis.

A MEETING was held on Wednesday, Dec. 9th, Dr. Stephen Mackenzie, President, in the chair (pathological evening).

Dr. F. CHARLEWOOD TURNER showed specimens from a case of Ulcerative Endocarditis.

Dr. F. J. SMITH showed a specimen of Ruptured Aortic Valve. A blacksmith aged fifty-two, of rather intemperate habits, complained of severe chest pain and dyspnœa, which had come on suddenly five days before. No syphilis or rheumatism. A loud double aortic bruit was heard. He died two days later. The heart was found of normal size; old atheroma affected the aorta and aortic valve, and one cusp of the valve was completely torn through.—The PRESIDENT referred to a case now under care, in which one chordæ tendineæ is believed to be ruptured.

Dr. A. T. DAVIES showed specimens from a case of general Tuberculosis with symptoms of Addison's disease. A married woman, aged thirty-nine, had suffered from progressive weakness and pigmentation of the skin for three or four months prior to admission to hospital; also incontinence of urine for six years. The entire skin was coloured yellowish brown, being darker (of a dirty brown hue) in the axilla, neck, and pubes. There was slight exophthalmos and enlarged spleen. Temperature 99° to 102°; some pus in the urine, sp. gr. 1010. She died in ten days. The supra-renal bodies were found to be enlarged by tubercular growth, most of which had become fibroid; there were numerous giant-cells. The left kidney was reduced to a caseous mass; the right was hydronephrotic, with dilated ureter. The bladder was extremely contracted, with old

tubercular growth in the thick walls; it could not have held more than an ounce of urine. There were small patches of old tubercle in the lungs—fibrous at the right apex, caseous at the left. In Dr. Greenhow's classification of Addison's disease (Pathological Society's Transactions) the case would belong to the class in which general tuberculosis was present.

Dr. WIGHTWICK read notes of a case of Recurrent Papillary Sarcoma of the Toe, with numerous Secondary Growths. A man, aged twenty-eight, came under care in a dying condition, with growths scattered widely in the subcutaneous tissue and in the lymphatic glands and viscera. On the great toe was a small recurrent papillary growth five-eighths of an inch in diameter. Thirteen months previously several small, hard, warty growths had been removed from the toe, one of them slightly ulcerated. They were diagnosed as simple papillomata; the femoral glands, however, were slightly enlarged. The family history on the paternal side showed a marked tendency to malignant disease. His grandfather died at sixty of cancer of the cheek; one uncle and two aunts of some form of cancer.—Mr. JOHN POLAND, who had seen the case, described the post-mortem appearances, and exhibited microscopical sections of the recurrent and of the secondary deposits. The lymphatic glands in the groin, abdomen, neck, &c., the lungs, kidneys, supra-renals, liver, mesentery, and peritoneum were full of growth. There were numerous subcutaneous nodules on the trunk, other nodules in one of the papillary muscles of the right ventricle, in the mitral valve, and in the pectoral muscles. The reddish colour of portions of the growths was found to be due to small ecchymoses. The microscopical structure was almost precisely that found in melanotic sarcoma of the skin, without, however, any pigmentation, the cells being of the large round variety. But in the toe the cells were more mixed, many of them tailed. In some places the cells were closely packed, with little matrix discernible, giving an alveolar appearance. Ranvier describes this form of sarcoma of the skin.

The PRESIDENT showed a specimen of Exfoliative Dermatitis, a cuticular glove, presented to the London Hospital by Mr. Gooch in 1769. The patient, a gentleman aged fifty, had shed the skin of his hands and feet regularly twice a year for ten years. Before the exfoliation the parts were red and painful, with an eruption of red spots. The *American Journal of Medical Sciences* for last August reported a similar case; for thirty-three years the patient had shed his skin on July 24th in each year (!), the exfoliation lasting from five to ten days, with pyrexia &c. Scaly masses of cuticle from a case in the recent epidemic of dermatitis at the Paddington Infirmary were also shown.

Mr. CHARTERS J. SYMONDS showed a specimen of Phosphorus Necrosis of the Jaw, in which a large sequestrum had been removed, comprising nearly the whole of the lower maxilla, without waiting for it to become loose. The disease was arrested, new bone was formed, and mastication with the remaining two teeth was carried on.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, DEC. 1ST, 1891.

Mr. ROBT. MERCER, M.R.C.S., President, in the chair.

Exhibits.—Dr. ARNOLD EVANS, medical officer of health, showed and described specimens of Fibrinous Bronchial Casts coughed up by a cow with pleuro-pneumonia, Kidney of Acute Nephritis ("black water") of Sheep, and Measly Pork showing Cysticercus Cellulosæ.

Spasmodic Torticollis treated by Neurectomy.—Mr. APPLEYARD showed a woman aged thirty-nine who had been treated for four months for spasmodic torticollis of gradually increasing severity. Drugs pushed to extreme limits had been unavailing, so the right spinal accessory nerve was cut down on in front of the sterno-mastoid and about three-quarters of an inch in length removed, the wound uniting directly, and the patient now being practically cured.—Dr. MAJOR advised surgical treatment in these severe cases, as medical treatment was without avail, and if left many of them tended to actual insanity.—Surgeon-Major COMYN, Mr. HORROCKS, and Dr. GOYDER also discussed the case.

Death-rates in Back-to-back Houses.—Dr. J. H. BELL read a paper, which will be published later, on this subject. He traversed the unanimous condemnation of all varieties of back-to-back houses by experts, stating that this condemnation was not supported by facts, and showed by extensive statistics extending over the past seven years, and drawn from nearly 2000 houses, that in certain classes of back-to-back houses over thirty years old, the death-rate was 15·8, in others, ten or twelve years old, it was 16·1, and in through houses, mostly ten to twenty-five years old, it was 17·3, the average death-rate of the borough in that time being 21·3.—Dr. ARNOLD EVANS, medical officer of health, criticised Dr. Bell's statistics as based on too few numbers to eliminate chance errors, and thought the comparison of old "through" with new back-to-back houses unjust. He was of opinion that back-to-backs as now built in Bradford were as healthy as that class of house could be made. He agreed with the body of opinion which condemned them.—Drs. GOYDER, DENBY, and the PRESIDENT continued the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

DEC. 17TH, 1891.

Mr. W. F. FAVELL, M.R.C.S., President, in the chair.

Dr. BURGESS showed a large Aneurysm of the Abdominal Aorta, and a Heart with a Perforation of the Mitral Valve and Vegetations on the Aortic Valves.

Mr. R. J. PYE SMITH exhibited Galezowski's Canaliculus Dilator.

Mr. SNELL introduced a patient who had had a foreign body (piece of steel) encapsuled in the lens for twenty-four years. The lens otherwise remained clear, and vision was still good.—Mr. R. J. PYE-SMITH made some remarks.

Dr. COCKING showed a case of Double Spasmodic Torticollis in a man aged forty-eight. For forty years he had been employed as a coal-getter ("timbering and holing"). There was no neurotic history. His health had been good up to twelve months ago, when he suffered from a spasmodic affection of the left arm, in which the elbow was slightly flexed, and the fingers suddenly extended, causing him to relax his grasp of the pick. This was followed by unilateral torticollis of the left side, complicated by a "shaking of the head" rather later, completely incapacitating him from work. When first seen, six weeks ago, there were rapid rhythmical oscillations of the head from side to side, the head being held stiffly in the middle line with a slight inclination forwards. The spasm came on in attacks, with short intermissions, and was occasionally replaced by unilateral torticollis. During the attacks both sterno-mastoids and the upper part of the trapezii were firmly contracted. There was also nystagmus on looking up and out, most marked on turning the eyes to the left. The bilateral spasm had recently considerably abated, and usually only a coarse tremor was then observed. When the patient assumed the position he generally occupied in "holing," the oscillations became extremely severe, and lasted for some time after resuming the erect posture. Nystagmus was still present. Dr. Cocking considered that the affection was due to excessive use of certain neck muscles required to maintain the head in the unnatural position necessitated by the patient's occupation. The occurrence of hammer—or pick—palsy with the torticollis bore out this conclusion. The association of both affections with nystagmus, which arose whilst working in candle-light, he regarded as corroborative of the view that "miners' nystagmus" was an occupation neurosis, called forth by overwork of certain ocular muscles which some kinds of work in coal mines required.—Mr. Court, Mr. Snell, Dr. Burgess, Dr. Dyson, and Mr. R. J. Pye-Smith took part in the discussion.

Polyuria and Retention.—Mr. B. WALKER related a curious case of Polyuria and Retention. A young woman aged seventeen was seized with severe abdominal pains. There was an impression that she might be pregnant. An examination disclosed retention of urine, and about eight pints were drawn off, the following morning seven pints, and again the next evening a large quantity, the urine being excessive for several days. A fortnight later she aborted, from which time she began to improve, and there was no further necessity for the introduction of the catheter.

Herpetic Fever.—Mr. COURT read a paper on Herpetic Fever, applying this term to a class of cases which he frequently met with, attended by an eruption of herpes labialis,

the eruption being accompanied by pyrexia, headache, vomiting and gastric disturbance, pain in the side, and frequently, but not invariably, by pneumonia. He proceeded to show that these cases ran a very definite course, the eruption appearing about the third or fourth day and lasting about six or seven days, the whole attack occupying from nine to twelve days. When pneumonia was present it differed from the ordinary type in not being marked by the usual stages, and in the small amount of expectoration in proportion to the extent of the lung mischief, recovery also being by lysis rather than crisis. In other cases the symptoms met with were chiefly abdominal. Mr. Court related the particulars of several of his cases as examples, some of them clearly showing the epidemic character of the complaint. He contended that the herpetic eruption had nothing in common with herpes zoster, but was rather the local expression of a constitutional malady caused by some specific poison like that of measles or scarlet fever. He further remarked on the favourable prognosis in cases of pneumonia which had herpes labialis for a trade-mark, quoting some observations of Dr. Hilton Fagge on this point, and arguing that this fact indicated a specific cause. Herpes did not occur in cases of pneumonia which arose secondarily to other morbid states, but only when the pneumonia was of a certain specific type. Herpes was not simply an indication of a febrile state, as it seldom if ever occurred in acute rheumatism, typhoid, or other specific fevers. On the other hand, an epidemic of simple herpes often coincided with the prevalence of epidemic pneumonia.—Dr. ST. CLAIR SYMONDS had found a new chromogenic micro-organism in the vesicles of herpes labialis, which he called the "bacillus viridans," and believed to be pathogenic.—Mr. COURT thought that this discovery might ultimately throw further light on the questions he had raised.—The President, Mr. B. Walker, Dr. S. Matthews, Dr. Dyson, Mr. James, Dr. Hargreaves, and Dr. Martin took part in the discussion.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, DEC. 2ND, 1891.

Mr. A. R. ANDERSON, President, in the chair.

Occupation and Health.—Dr. WILLS, medical officer of health for Southwell, read a paper on occupation and health. He quoted statistics compiled by Drs. Richardson, Hirt, and Ogle to show the influence of various occupations on health, dwelling chiefly on those which were detrimental. He discussed noxious influences in regard to the etiology of tubercle, and exemplified such causes by means of death-rate tables. For persons predisposed to tubercle he recommended sheep-farming on the highlands of Cape Colony (altitude 2000-7000 feet), the climate of which he considered superior to that of Davos, Mentone, or the Canaries. The death-rates from phthisis in the army and navy respectively were in marked contrast, in the former case high, and in the latter singularly low—a difference which could only be attributed to the different character of the occupation followed by the members of each service. For persons who could not go away, he recommended out-door occupation in the country instead of living in the crowded streets and workshops of towns; and for women the culture of fruit and flowers was recommended as being light and remunerative employment. To provide for vicissitudes of weather, large glass-houses, similar to winter gardens, should be erected in situations as elevated and as near the sea as possible. In this case, work might go on all the year round. In this manner suitable hygienic conditions might be obtained for persons of small means, while the fatigues of travel, with its attendant risks of damp roads and bad drainage, would be avoided. The President, Messrs. Ransom, Tew, Powell, and Hunter took part in the discussion, and Dr. Wills replied.

Intussusception.—Mr. POWELL showed the intestine from an idiot, aged forty, in whom the chief symptoms were vomiting and rapidly fatal collapse, but pain seemed to be absent except in the later stages. There were two intussusceptions in the upper part of the jejunum, separated by healthy bowel.

Pyo-pneumothorax.—Dr. W. B. RANSOM showed the organs from a young married woman who died with symptoms of pneumothorax preceded by hectic of some duration. Post mortem there was found considerable matting between the stomach, liver, and parietes. Behind the stomach and liver was a large abscess cavity extending up to the diaphragm, through which pus and gas had made their way into the right pleural cavity. The patient had had hematemesis some years before; scars of old ulcers were found in the stomach, and it was supposed the abdominal abscess resulted from perforation of one of these ulcers, and that the resulting mischief had been localised by adhesions.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.

THURSDAY, NOV. 26TH, 1891.

WALTER RIDLEY, F.R.C.S., President, in the chair.

Cases.—Dr. J. A. JACKSON showed a case of Hodgkin's Disease with photographs. The patient was a boy aged eight. There was great enlargement of the left cervical gland, and the spleen was somewhat enlarged. There had been slight, but continued, fever for some weeks. The boy was anæmic, and examination of the blood showed the red corpuscles were only 76 per cent. The white corpuscles were normal in appearance and were not more numerous than in health. Drs. G. Murray, Oliver, Robertson, and Drummond made remarks.—Dr. SLATER showed a patient with Solid Œdema of the Leg. The condition appeared to be due to obstruction in the lymphatic vessels following an injury four years ago.—Dr. H. BAUMGARTNER and Dr. GEORGE MURRAY showed a patient who had been cured of an empyema by excision of ribs and drainage. There had been a large purulent effusion in the right pleural cavity. An incision had first been made in the sixth intercostal space and a drainage tube inserted. As drainage did not take place properly, portions of the sixth and seventh ribs were excised. A few days later the cavity was washed out daily for a week with a warm solution of boracic acid. Ultimately the lung expanded well, the wound healed and a good result was obtained with but little deformity.—Drs. Smith, Mearns, Galloway, Percival, Oliver, Black, Lyon Smith, and Drummond made remarks.—Dr. W. ROBERTSON showed a patient with Pachyderma Laryngis Diffusa, in which there was thickening of the rima glottidis corresponding to that part of the mucous membrane covered by squamous epithelium. He also showed a case of Laryngeal Phthisis and two cases of Mastoid Disease.—Mr. BLACK showed a patient on whom he had performed Wheelhouse's operation, and had obtained a good result.

Mr. BLACK showed casts of an extreme case of Talipes Equino-varus, taken before and after the operation, in which the astragalus had been removed and the tissues in the sole of the foot divided. A very good result had been obtained. Dr. HUGHES showed the Larynx from a patient who had died of Diphtheria, which showed the false membrane still adherent.

Dr. Coley's interesting paper on the "Treatment of Coughs" was then read.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

FRIDAY, NOV. 20TH, 1891.

Dr. BRAITHWAITE in the chair.

DR. BRAITHWAITE showed (1) Cancerous Broad Ligament Cyst of large size; (2) Papilloma of the Hilus; (3) Apoplexy of the Ovary; (4) Microscopic Sections of Diseased Ovaries.

Mr. MAYO ROBSON showed (1) a large Solid Tumour of the Ovary (cystic sarcoma) successfully removed from a patient aged sixty-three; (2) a Large Fibro-cystic Tumour of the Uterus, removed by abdominal hysterectomy; (3) two cases of Tubal Gestation, removed by abdominal section. In both cases he found the abdomen full of blood; he first grasped the base of the tube with forceps, and then removed the clots and washed out the abdominal cavity with boiled water, removed the tubes and cyst, and put in a drainage-tube. Both patients recovered. Mr. Robson noticed in these cases that washing out the abdominal cavity seemed to restore the pulse, as it were, by a process of transfusion.

Dr. HELLIER showed the Appendages removed six weeks previously from a single woman of thirty. The diagnosis had been uterine myoma, with post-uterine tumour suspected to be ovarian. This was confirmed on section, an

ovarian cyst, the size of an orange, lying in the pouch of Douglas; right ovary also cystic. Result excellent up to date. He also showed a section from a case where the greatly enlarged uterus was lined by vegetating growth throughout. This was considered to be non-malignant.

Cancer of the Cervix Uteri.—Dr. J. F. HORNE (Barnsley) read a paper on the Necessity for Early Operation in Cancer of the Cervix Uterus. The patient came suffering from general debility, loss of flesh, with an irregular and profuse watery discharge from the vagina, which perhaps has lately become of a sanious, watery, and offensive character. Usually there is no pain; if present, it will be in the back, of a dull, gnawing character. When the growth has become parametric the pain is sharp, and often shoots down the thigh. Also the patient may complain of hæmorrhage following extra or painful menstruation or defecation. On vaginal examination we find the uterus possibly fixed, lips everted and enlarged, spreading like a mushroom in the vagina. In others the irregularly ulcerated surface of the cervix, soft and friable, with its hard and unyielding margins, are felt. The only treatment for these cases is amputation of the cervix as high up as possible. As illustrating this, Dr. Horne related the case of a woman aged twenty-nine from whom he removed the vaginal portion of the cervix for cancer. It was found that where the diseased mass had touched the vaginal walls deep ulceration of the mucous membrane had resulted. The surface was touched with a strong solution of chloride of zinc The patient made a good recovery, and a year after operation she looked healthy and well, and had gained weight. There was no vaginal discharge. The cervix was replaced by a puckered condition, which to the finger appeared quite healthy. The abraded vaginal mucous membrane appeared quite healthy.—Dr. BRAITHWAITE and Dr. HELLIER also spoke on this case.

Reid's Dilators.—Dr. BRAITHWAITE read a note on Reid's uterine dilators, relating several cases illustrating their good qualities. One was that of a lady aged thirty-four, unmarried, who had had dysmenorrhœa since she was eighteen. Had derived no benefit from the homœopathic physician who usually attended the family. Dr. Braithwaite dilated the cervix with Hegar's dilators to size 7, and inserted a large laminaria tent for the night. No benefit whatever followed this dilatation. A year after Dr. Braithwaite again dilated and used the tent as before, but on the second morning dilated with Reid's dilators to No. 4, not passing it quite up to the full length. The result has so far been an absolute success.—Mr. WRIGHT and Dr. HELLIER joined in the discussion.

Reviews and Notices of Books.

International Clinics: a Quarterly of Clinical Lectures by Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain, and Canada. Edited by J. M. KEATING, M.D., J. P. CROZER GRIFFITH, M.D., J. MITCHELL BRUCE, M.D., and DAVID W. FINLAY, M.D. Vols. I. and II. Edinburgh and London: Young J. Pentland. 1891.

To those who remember the admirable clinical lectures of Trousseau and of Todd these two volumes may, at the first glance, be somewhat disappointing. They contain a great deal that is interesting, and yet the scholarly swing of forcible language which characterised the work of the great clinical teachers of a past generation appears to have almost died out. Still, the main idea is good, and in many cases the mode of treatment is satisfactory. Perhaps the first feeling of disappointment results from the difficulty of rapidly turning from one style to another, until all idea of personality is confused or lost. One great charm of clinical teaching surely lies in the recognition of the personal equation of the teacher. The cases described must of course furnish their own interest; but a good clinical teacher, whose previous work in any given direction is well known, can endow an apparently trivial case with valuable suggestive sidelights of information. On the other hand, a series of short lectures by a number of different teachers necessarily loses the personal element to a very large extent, especially when submitted to editorial suggestions, which probably tend to limit freedom of treatment. Each lecture indeed may in itself be satisfying, and yet the mental effort required to realise the new point of view assumed in each leads to a sense of weariness after the perusal of many pages. The volumes therefore are rather to be commended as books of reference than as guides which can be followed with sustained interest from cover to cover.

The leading idea is to make this periodical a complete post-graduate course of medical instruction, and as the "didactic professor" is said to present the position of the science of medicine in a formal and well-considered manner, the "clinical teacher" has to supplement the course of instruction by making the various formularies practical and applying them to the individual case. Notwithstanding this assumed distinction, it is consolatory to find the names of very many professors amongst the contributors.

With no less than thirty-six lectures in the first volume, and thirty-nine in the second, it is obviously impossible to criticise the work of the different writers in detail, still less to indicate how far their views are in accordance with those generally accepted. Even an enumeration of the subjects dealt with would reach to an indefinite length, as frequently one lecture will touch briefly upon some half-dozen or more cases in the wards; indeed, in one instance, no less than nine cases are described, illustrating totally unconnected types of disease. The surgeons are the chief offenders in this respect, several of the surgical clinics consisting of little more than the remarks made at the side of the operating table, with a line or two in brackets giving the subsequent history of the case.

In the first volume there is an interesting lecture by Dr. James Ross on acromegaly, this somewhat rare condition being well described, and the account being assisted by several plates. Dr. Porter lectures on polycæmia or plethora in its relation to inflammation. Mr. Christopher Heath, speaking of *dysphonia clericorum*, incidentally notes the rarity of this condition among elderly married clergyman. Dr. Gairdner discusses a case of hydrothorax with dexiocardia, and Dr. Mac Donnell gives a very complete history of a case of enlarged liver with jaundice, with his reasons for the diagnosis ultimately arrived at. Dr. Shattuck of Harvard deals with uræmic convulsions and with epilepsy, and then place is made for the surgeons. Professor W. Keen lectures on modern methods in surgical operations; Professor Cheever on ulcers; Mr. Hulke on a case of injury of the head; Professor Gaston on Wyeth's hip-joint amputation in a case of cystic sarcoma of the thigh; and Mr. Mayo Robson on cholelithiasis, noting in the course of the lecture the indications for surgical treatment. Gynæcology and obstetrics are dealt with by many teachers of well-established reputation.

Dr. Forchheimer gives an interesting account of tonsillar diphtheria, and Dr. L. C. Gray discourses on different types of paralysis in young children. Sir Dyce Duckworth lectures on chorea, and states that the future life history of some of the so-called non-rheumatic cases shows that rheumatic manifestation may supervene later. Professor H. C. Wood makes some interesting remarks on traumatic hysteria, regarding the treatment as largely a match between the character and wits of the physician and the character and wits of the patient. Lectures by Professor Ferrier on alcoholic paralysis and Professor Weir-Mitchell on the treatment of obstinate sciatic pain by splint rest and cold further enhance the value of the first volume.

The second volume is a worthy successor to the first, the chief papers in the medical section being those on ulcerative endocarditis, on the treatment of enteric fever by

systematic cold bathing, on the pathology of angina pectoris, and on lead colic. Catholicity of doctrine is illustrated in the surgical section by lectures respectively advocating gradual dilatation and rapid dilatation in stricture of the urethra; most of the other surgical lectures, however, refer to numerous unconnected cases. There are also several interesting lectures under the headings of neurology and of gynæcology and obstetrics.

Reviewing the contents of the two volumes, it may be safely asserted that this new quarterly venture will afford additional facilities for easily ascertaining the views of many of the clinical teachers of the day, and that it will thus prove a valuable addition to medical literature, even though it requires to be considered piecemeal rather than as a whole.

A Manual of Operative Surgery. By FREDERICK TREVES, F.R.C.S., Surgeon to and Lecturer on Anatomy at the London Hospital; Member of the Board of Examiners of the Royal College of Surgeons. With 422 Illustrations. London: Cassell and Co., Limited. 1891.

ONLY those who have attempted it are able fully to realise the difficulty of the task Mr. Treves set himself when he undertook to write a manual of operative surgery. The scope of such a work is very ill defined, and there are no rigid tests by which it can be limited. The literature of the subject is very extensive, the ways of accomplishing the same end are oftentimes very numerous, the small modifications introduced by individual surgeons are almost endless, and the force with which they appeal to others varies widely, while their true value often depends upon the peculiarities of a patient or even of the operator himself. What to choose from the mass of material is the writer's first great difficulty. To limit himself to those operations and methods with which he is himself familiar or which he prefers is to diminish the value of the book as one of reference very greatly. To include all methods and all varieties of operations is uselessly to encumber his pages. When this initial difficulty has been overcome there remains another quite as great in the manner of describing an operation. We have all read descriptions of operations which have formed no safe guide for their performance, and this not from their too great terseness or brevity, but from the writer's failure to place himself in the position of one quite unfamiliar with the details of what he has to do. The faculty of giving just the information required, of laying due stress upon the essential points without wearying with unnecessary details, is probably only fully acquired by those who for a long period have had to teach operative surgery.

Mr. Treves states in his preface that all his leisure for the past four years has been devoted to the preparation of this book. He has taken great pains to make himself acquainted with the literature of the subject—French, German, and English—and he states that his descriptions are founded upon personal experience in the operating theatre, and upon repeated operations upon the dead. He has made no attempt at "encyclopædic completeness," but has selected those measures that have appeared to him to be the best. Without endorsing it in every particular, we must say that Mr. Treves' selection appears to us to have been very judicious. This is a matter upon which entire unanimity cannot be hoped for, but we believe that candid readers and experienced operators will find very little to quarrel with in this respect in the book before us. The descriptions also are, on the whole, well done; in some cases they might certainly be more terse, but they will be found safe guides. The questions of the preparation of the patient for operation, the after treatment of the case, and the relative merits of different operations are sufficiently and aptly discussed. The anatomy of organs and regions is given with all necessary detail, and of course with accuracy. The indications for operation are not dealt with, and this is a matter on which many readers will wish Mr. Treves had taken a different view. There is much, no doubt, to be said in favour of excluding this subject from a manual dealing only with operative procedures, but for students and young surgeons such an addition would have been very acceptable. The majority of the illustrations are new and original, and they are admirable in design and execution—real helps to the reader. The feature of all others in this work which specially commends it, and in which it is in striking contrast to some manuals and text-books, is the pains Mr. Treves has taken to mention the work of other surgeons under their name. In very many instances operations are described in the very words used by those who first performed them, and the many modifications and details that are mentioned are carefully attributed to their authors. This is a special and a very praiseworthy feature of the book, and is the strongest evidence of the care taken in its preparation. The work is well up to date. We have met with one curious omission—there is no reference to operations upon varicose veins of the lower limbs.

The publishers have done their work well. The type is admirable, the paper good, and the edges cut, and the two handsome volumes are of a convenient size.

A Manual of Physics: being an Introduction to the Study of Physical Science. Designed for the use of University Students. By WILLIAM PEDDIE, D.Sc., F.R.S.E., Assistant to the Professor of Natural Philosophy in the University of Edinburgh. London: Baillière, Tindall, and Cox. 1892.

AS an elementary exposition of the application of mathematics to physics, Dr. William Peddie's manual is deserving of the highest praise. It should be extremely useful to students reading for honours at the universities, for it covers an extent of ground which is taken up by no other existing text-book on applied mathematics that we know of, and Dr. Peddie's treatment of both the mathematical and the physical aspects of the subject is extremely good, being thoroughly sound and scientific. The book reflects credit on the publishers, being well got up, clearly printed, and provided with excellent diagrams. At the same time, we are rather disappointed that Dr. Peddie has not seen his way to provide a text-book for another class of student whose knowledge of mathematics is limited. We are thinking especially of the medical student, for whom it is of the greatest importance to learn the fundamental principles of physics, that he may understand the instruments in constant use in the physiological laboratory and in the clinical ward, as well as the purely physical laws which govern the action of the body. Such a student, we feel sure, would find himself almost at once out of his depth on attempting to read this book. Dr. Peddie suggests that the mathematical portions may be skipped, but mathematics is everywhere so much to the fore that without it the book would be like Hamlet without Hamlet.

When Dr. Peddie finds a new edition called for, it might be worth his while to consider the wants of junior students. To this end the printing of the mathematical portions in smaller type might contribute. Certain subjects, such as the properties of matter, statics, and hydrostatics, might with advantage be treated at greater length. In this way, without diminishing the usefulness of the book for honours students, it might be made more serviceable to the wants of the great body of students.

OUR LIBRARY TABLE.

Text book of the Principles and Practice of Medicine. By the late CHARLES HILTON FAGGE, M.D., F.R.C.P., and PHILIP HENRY PYE-SMITH, M.D., F.R.S., F.R.C.P. Third

Edition. London: J. and A. Churchill. 1891.—The very thorough revision to which Dr. Pye-Smith has subjected this valuable work—perhaps the most important treatise on medicine that has ever been issued in this country—is more than sufficient to justify the use of his name as joint author rather than that of editor to Dr. Fagge's writing. It now includes whole chapters contributed by Dr. Pye-Smith on subjects which the original author did not live to complete, or which he had left only in fragmentary form, and, moreover, the rapid progress of knowledge in many directions of late years has necessitated the rewriting of many pages of the text and the introduction of much new matter. It would be tedious to specify in detail all these changes, commencing with the introductory chapter, which, in its terse and aphoristic style and rational views, is pleasant as well as profitable to peruse, down to the sections on Diseases of the Skin, which complete the work. It must suffice to say that nothing has been added that was not needed, nor anything excised that was not superfluous. Consequently the practitioner and the student have in this work as thorough and complete a survey of modern medicine and pathology as could well be desired. We may note, too, as not unimportant improvements which will greatly facilitate reference, the inclusion of the very carefully compiled index at the close of each volume and the recasting of the bibliographical index, which in its original form was of little use, but which now will be of great service. Lastly, Dr. Pye-Smith has introduced a new feature in scientific writings, one, perhaps, which has been left too much to writers of fiction. This consists in the placing at the head of each chapter some appropriate quotation, which stands as the motto for the subject dealt with. The selection of such quotations has been very happily carried out, and it gives a pleasing view of the wide erudition of the author who has availed himself of them. Nor are we so old-fashioned as to deprecate their introduction. Indeed, they afford a lesson in themselves, and show in matters of observation how the ages are linked together. "Fagge's Medicine" will, we may safely predict, long continue to be regarded as the most thorough and most scholarly treatise of modern times.

The Elements of Ophthalmic Therapeutics; being the Richard Middlemore Post-graduate Lectures delivered at the Birmingham and Midland Eye Hospital, 1889. By D. C. LLOYD-OWEN, Senior Surgeon to the Hospital. Birmingham: Cornish Brothers, 37, New-street. 1890. Pp. 68.—In these lectures Mr. Lloyd-Owen seeks to present to the general practitioner an epitome of the practical knowledge that has been acquired during the last few years of the action of drugs upon the eye. He gives a short but interesting introduction, stating that Mr. Middlemore, whose death at a very advanced age we had recently occasion to notice, had instituted a lectureship the first holder of which is Mr. Lloyd-Owen, whose lectures are contained in the work before us. The drugs to which he calls attention are atropine, cocaine, eserine, pilocarpine; the principal astringents, such as nitrate of silver, mercury perchloride, sulphate of zinc and of copper, zinc chloride, lead acetate, vinum opii, calomel, boric, salicylic, and carbolic acids; and, lastly, iodoform, resorcin, hydroquinone, and iodol. He does not mention the allied compound salol, which has been found useful as an antiseptic. He discusses the relative value of the application of heat and cold and of bloodletting. In regard to internal remedies, he has found small doses of the bromide of potassium and chloral, repeated at regular intervals, to be very effective in calming the irritation which so often accompanies phlyctenular keratitis in children. A final chapter is devoted to internal remedies, and especially to the effect of narcotics and quinine. These lectures will put the practitioner *en rapport* with all recent work in this direction.

An Atlas of Illustrations of Pathology. Fasciculus VIII.: Diseases of Brain and Spinal Cord. The New Sydenham Society. London: H. K. Lewis. 1891.—The New Sydenham Society is doing good service in issuing a series of pathological drawings which are extremely well executed and faithful. The present instalment of the Atlas contains plates in illustration of hydatid disease and abscess of the brain, as well as of tubercular tumours, besides several of lesions of the spinal cord. Most of the plates in this fasciculus are reproduced from Auvert's Atlas, which is but little known in this country; but two showing the effects of compression of the cord from fracture of the spine are from Mr. Hutchinson's collection. The explanatory text is clear and concise; and indeed the whole production is highly creditable to the Society, and will be much appreciated by its members.

Elementary Inorganic Chemistry, Theoretical and Practical. By A. HUMBOLDT SEXTON, F.R.S.E., F.I.C., F.C.S. New Edition. London: Blackie and Son, Limited, Old Bailey, E.C. 1891.—Of this little work, as of scores of other similar works, we can only say that, while no exception can be taken to the matter contained therein, it possesses no special element of novelty. It is an extension of the author's lectures delivered to students at evening classes, and is really intended for those who present themselves for the examination in Chemistry held by the Science and Art Department. The author has, indeed, thought it advisable to keep the requirements of the syllabus before him in preparing the book, although he has not hesitated, he confesses, to go beyond the syllabus where it has seemed good so to do. Had he included an account of such elements as bromine, iodine, fluorine, and devoted more than nine pages to organic chemistry, the book would have been more useful. As a practical introduction to the science, however, for the use of those students already referred to it is well fitted to serve.

The Asclepiad. No. 32. Vol. VIII. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. London: Longmans, Green, and Co.—This number concludes the eighth volume of what is certainly one of the literary marvels of the day—a quarterly journal full of original thought and the record of personal investigation, which from end to end is the product of a single pen. The felicity of its author's style and the wise selection of topics combine to render it one of the most readable of serials, and sufficiently account for the measure of success which his bold venture has attained. One noteworthy feature of the *Asclepiad* consists in the faithful biographies of departed medical worthies which run through its volumes. The memoir this time is of a man whose life and work are, we fancy, known to but a few of the present day. Yet his was a notable figure, and he left his mark upon medicine and literature, more perhaps in the latter than the former department, for he was the author of works of fiction and history, including a sketch of the French Revolution, of which he was an eye-witness. This was Dr. John Moore, whose fame, perhaps, as Dr. Richardson suggests, has been eclipsed by that of his soldier son, the hero of Corunna. The autotype reproduction of Dr. Moore's portrait which accompanies the memoir shows us a face of strongly marked intellectual type and benevolent aspect. It is impossible to see it without understanding the esteem in which he was held by his contemporaries. Dr. Richardson gives us a fourth and concluding part of his monograph on Peroxide of Hydrogen, containing several formulæ for the exhibition of this powerful agent. A characteristic and charming essay on the Physiology of Tears follows. Then there are several "Opuscula Practica," which comprise such matters as cranial auscultation, the diagnosis of arterial cranial murmur, and labyrinthine disease, saline transfusion, &c. In a lecture on the "Cerebro-spinal Axis as a Thermal Centre and Water-power," the author introduces a new theory

of the *modus operandi* of the nervous system, in which the cerebro-spinal fluid takes a prominent share. The number concludes with reviews and book notices, which we are glad to learn are to be given more space in the future.

Analytical Records.

PALATINOIDS AND BI-PALATINOIDS.

(MESSRS. OPPENHEIMER, SON, & CO., 14, WORSHIP-STREET, E.C.)

IT is now somewhat more than a year ago that we gave prominence to a new and elegant method for the administration of nauseous and unstable drugs. At that time we published a full account of the examination and analyses made, and the results were so good and satisfactory as to be assigned no small section of the space usually allotted to THE LANCET Analytical Records. A palatinoid consists, as it was then explained, of a thin air-tight jujube, containing the medicament in a pure and finely powdered state. By its employment an excipient is thus dispensed with, the taste of nauseous drugs like the valerianates and quinine effectually disguised, and the unpleasant effect of iron salts, for example, in the mouth and on the teeth obviated. The shape of the palatinoid is conveniently bi-convex, and it is composed of jujube material, which, when moistened by the saliva, becomes slippery, enabling the patient to swallow it without any difficulty. According to our previous experiments, the contents are discharged in about three minutes after immersion in water at 100° F. While we recognise in the palatinoid one of the best methods for the administration of unstable and nauseous drugs that have hitherto been devised, yet we think that the bi-palatinoid recently introduced by Messrs. Oppenheimer and Co. is entitled perhaps to even greater praise by reason of the ingenuity and skill which it displays. The ordinary palatinoid has probably given rise to the idea of the double or bi-palatinoid. The former is intended to administer inert or compatible ingredients, and the latter incompatible ingredients or ingredients that readily decompose one another, resulting in the production of a newly desired compound. Practitioners have long recognised the difficulty of administering many of the valuable combinations of the proto-iron salts in a satisfactory and pure condition. Griffith's Mixture (Mist. Ferri Co. B.P.) and Blaud's pill, for example, are so made as to give, as a product of double decomposition, pure ferrous carbonate. Both, and especially the former, undergo more or less rapid change by oxidation into persalts. A mixture of solid potassium carbonate and ferrous sulphate, as in Blaud's pill, even if only slightly moist, gradually decomposes and forms oxy-salts. Still more unsatisfactory are the B.P. preparations of ferrous arseniate and phosphate. The Pharmacopœia allows, it would appear, no less than 55 per cent. of impurity in ferrous phosphate, and 90 per cent. in ferrous arseniate. Any method therefore which aims at securing greater ease of administration, greater accuracy of dosage, and accordingly a full and more certain therapeutic effect from medicaments such as those mentioned, will, as a matter of course, meet with hearty and very general approval. If clinical experience is found to confirm the excellent results obtained with Messrs. Oppenheimer's bi-palatinoids in the following chemical analyses, then their employment places the administration of exceedingly unstable compounds, like ferrous carbonate, phosphate, and arseniate, upon a sounder and more scientific basis. The bi-palatinoid resembles the ordinary palatinoid as regards appearance and shape, but it contains, in addition, a septum of thin pure jujube, which serves to separate incompatible ingredients. In the event of the presence of a third or

ANALYSES OF BI-PALATINOIDS.

Stated contents of each bi-palatinoid.	Mean quantities in grains found on analysis.					Composition and character of washed precipitate or new product.	Equations and theoretical requirements.
	Ferri sulph.	Sodii carb.	Sodii phosph.	Sodii arsenias.	Alkaloids.		
Ferrous carbonate { Ferri sulph. exsic., gr. 1 / Sodii carb., gr. ½ (0·62) }	1·10	0·60	—	—	—	Pure ferrous carbonate $FeCO_3$ greyish-white ppt.	$FeSO_4H_2O + Na_2CO_3 = FeCO_3 + Na_2SO_4 + H_2O$. Proportion should therefore be 1 gr. ferri sulph. to 0·62 sodii carb
Ferrous carbonate cum pulv. aloes barb. { Ferri sulph. exsic., gr. 1 / Sodii carb. exsic., gr. ½ (0·62) / Pulv. aloes barb., gr. ½ }	1·04	0·55	—	—	—	Ferrous carbonate coloured by aloes.	*Vide supra*
Ferrous phosphate { Ferri sulph. exsic., gr. 1 / Sodii phosph. exsic., gr. ½ (0·5) / Sodii carb. exsic., gr. ½ (0·25) }	0·97	0·30	0·57	—	—	Pure ferrous phosphate $Fe_3(PO_4)_2$. Dirty white ppt.	$3FeSO_4H_2O + 2Na_2HPO_4 + Na_2CO_3 = Fe_3(PO_4)_2 + 3Na_2SO_4 + CO_2 + 3H_2O$. That is, 1 gr. ferri sulph. with 0·5 sodii phosph. and 0·20 sodii carb.
Ferrous carbonate cum ferrous arseniate { Ferri sulph. exsic., gr. 1 / Sodii carb. exsic., gr. ½ (0·62) / Sodii arsenias anhyd., ¼ (0·031) }	1·04	0·57	—	0·05 (32 palatinoids taken)	—	Mixed greenish ppt. No ferric salt.	$FeSO_4H_2O + Na_2CO_3 = FeCO_3 + Na_2SO_4 + H_2O$ and $3FeCO_3 + 2Na_2HAsO_4 = Fe_3(AsO_4)_2 + 2Na_2CO_3 + H_2O + CO_2$.
Ferrous carbonate cum ext. nucis vomicæ { Ferri sulph. exsic., gr. 1 / Sodii carb. exsic., gr. ½ (0·62) / Ext. nucis vom., gr. ¼ }	1·07	0·61	—	—	0·30 (brucine and strychnine from 12 pal.)	White tinged with green.	*Vide supra.*
Ferrous phosphate cum ext. nucis vomicæ { Ferri sulph. exsic., gr. ¾ (0·75) / Sodii phosph. exsic., gr. ⅜ (0·37) / Sodii carb., exsic., gr. ¼ (0·125) / Ext. nucis vom., gr. ¼ }	0·80	0·18	0·35	—	0·30 (brucine and strychnine from 12 palatinoids).	Pure ferrous salt. Dirty slate-coloured ppt.	*Vide supra.*

fourth ingredient it is placed with the compatible substance. In the bi-palatinoids examined, for example, phosphate of soda, nux vomica, and aloes were present in the compartment containing the carbonate of soda, the iron salt in all cases being apart. The bi-palatinoids enumerated below averaged in diameter about a quarter of an inch and in depth one-eighth of an inch. Like the ordinary palatinoid, they soon open under the solvent influence of lukewarm water and discharge their contents, which at once react to produce a new compound in a perfectly fresh, moist, and pure condition, and not improbably in that active state chemically known as nascent. The experiments conducted in our laboratory not only show that this action does take place, but they also indicate the especial precaution that has been taken to ensure the exact proportion of ingredients which are to react to produce the proper quantity of the new medicament. For the purposes of experiment the palatinoids were dissolved in oxygen-free water, resting under a layer of light petroleum, so as to exclude air. The resulting precipitate was allowed to subside and the excess of water removed, and the precipitate washed with oxygen-free water several times by decantation. It was then analysed and examined. The ingredients of each bi-palatinoid were also carefully separated and analysed. There is no need to offer any interpretation of the results—they are so palpably satisfactory.

CITY OF LONDON SANITARY SLATE.

(J. BEEDZLER & CO., NORTON FOLGATE, WORSHIP-STREET, E.C.)

According to the highly characteristic smell and to the physical constants we were able to obtain, the substance of this slate consists of practically pure naphthalene, a hydrocarbon which is in some instances a valuable disinfectant and antiseptic. Naphthalene melts at 79° C., and boils at 218° C. The figures actually yielded by the above preparation were—melting-point, 79·5° C.; and boiling-point, 217° C. We were not able to satisfy ourselves that carbolic acid was present, as, on shaking some of the powdered material with caustic soda solution and filtering, no precipitate was obtained on adding acid and bromine water to the filtrate. The sanitary slate may possess certain value as an antiseptic &c., but it can hardly be claimed to act as an aerial disinfector of any power. A more probable advantage, we imagine, would be gained from its employment as a preventive against the attacks of midges, mosquitoes, and similar pests. The slate is made in a form convenient for hanging upon the walls of a room or closet.

ESENCIA DE CALISAYA.

(MOSQUERA JULIA FOOD COMPANY, DETROIT, MICHIGAN, AND NEW YORK.)

This preparation is described as a tonic of great merit in all cases where the use of cinchona is indicated. It has the colour and appearance of port wine, is slightly acid in reaction, and somewhat syrupy in consistence. It is sweet and pungent to the taste, and produces a warm sensation in the throat much in the same way as a liqueur, but leaving a distinctly bitter flavour in the mouth. The active principles of Calisaya bark were successfully extracted. Inasmuch as each ounce is said to contain the equivalent of four ounces of bark, it is no doubt a valuable as it is an elegant preparation.

BENZOZOL, OR BENZOYL GUAIACOL.

(BURROUGHS, WELLCOME, & CO., SNOW HILL, E.C.)

Benzoyl guaiacol, according to Jacobsen, occurs in the volatile oils that are invariably associated in small quantity with the benzoic acid obtained by subliming gum benzoin. It is a white crystalline substance, and is said to be decomposed in the digestive tract into its proximate constituents, benzoic acid and guaiacol. Within half an hour after ingestion the latter body can be detected, it is stated, in the saliva and the urine. Guaiacol, it will be remembered, is a diatomic phenol, and is represented by the formula $C_6H_4OHOCH_3$. Though not soluble in cold water, benzoyl guaiacol appears to undergo gradual decomposition in hot water. Our own experiments showed that this interesting substance melts under boiling water, melts and then burns with sooty flame when heated on platinum foil, and dissolves readily in alcohol. It dissolves also in cold sulphuric acid, and on pouring the solution into water benzoic acid separates, and may be collected and tested. Benzozol is described as useful in cases of incipient phthisis, and as an agreeable and harmless substitute for creasote.

New Inventions.

HICKS'S NEW PATENT CLINICAL THERMOMETER.

WE have received some specimens of clinical thermometers devised by Mr. Hicks, which are accompanied by testimony from Mr. Whipple, the superintendent of Kew Observatory, showing, as the result of his experiments, that these instruments record the temperature of the blood in periods of from half a minute to a minute and a half. This desirable object has been attained by reducing the bulk of the bulb, and also dispensing with the usual contraction in the stem which is to be found in all other clinical thermometers at a distance of about one inch from the bulb. In that pattern, therefore, the graduation of the thermometer commences at some distance from the bulb, adding to the length of the instrument. Moreover, in the contraction there was a small chamber which retained a quantity of mercury equal to about ten or twelve degrees of temperature. This quantity of mercury was so far away from the bulb that it seldom got properly heated, as it was quite beyond the reach of the mouth, causing the thermometer to be sluggish in registering a true temperature, and the contraction was a point at which the thermometer usually broke when dropped. The "Non Plus Ultra" has no contraction in the stem, and no chamber to contain superfluous mercury. Its constriction is made in the top of the bulb itself; consequently, the whole of the mercury gets thoroughly warmed at once, and the temperature is not only recorded more accurately than before, but in half the time. There being no contraction in the stem, the space of one inch (referred to above) which used to be wasted is now turned to good account, as the divisions and figures are brought down close to the bulb. The scale of the thermometer is therefore rendered nearly twice as open as before, and is much more easily and accurately read. The indestructible index is, of course, retained. A four-inch "Non Plus Ultra" clinical thermometer will show as open a scale of graduations as that previously provided on a six-inch thermometer. The maker claims for the "Non Plus Ultra" greater accuracy, greater strength, and quicker action. Notwithstanding these advantages, there is no increase in the price. We may add that we have found this thermometer to possess the advantages claimed for it, and can recommend it to the profession.

AN EUSTACHIAN INFLATOR FOR SELF-USE.

I HAVE long made use of the act of blowing on the part of the patient as an easy means of opening the Eustachian tube during the operation of inflation of the middle ear by the Politzer bag, and Dr. Ward Cousins employs the same

principle in the use of his tympanic evacuator and inflator. At the same time, it must be admitted that for adults the swallowing of a little water is superior to mere labial blowing; but in the case of children the preferability of the blowing method is unquestionable. What I consider is almost worthy of being termed "a simplified and improved method of Eustachian inflation for children" consists in gently blowing up the nostril by means of Politzer's bag while the child blows through a tube with a very narrow bore, such as an Eustachian catheter or a pipe-stem, at the same time puffing out the cheeks.

On the same principle I have provided a number of my patients with what I call the "Eustachian Self-Inflator." It consists of the not very novel structure of a piece of india-rubber tube about $\frac{1}{16}$ in. in internal diameter and of about 12 in. in length. At one end is a glass tube, covered with an indiarubber teat, and adapted to fit comfortably into the nostril. At the other end is a glass mouthpiece, with a bulbous swelling, into which is loosely packed a little cotton-wool (*vide* engraving). On to this wool I drop a few minims of chloroform, and instruct the patient to blow two or three times through the tube while sniffing cautiously at the other end till the extreme pungency of the chloroform passes off. He then inserts the nosepiece into one nostril, closes the other, and blows. It is well known that air or steam enters much more easily into the Eustachian tubes if mildly impregnated with chloroform vapour, and I have taken advantage of that fact in devising the self-inflator. If an ordinary breath is insufficient to inflate the tympana, additional power may be obtained by the patient previously drawing a full breath. At the same time, I urge the patient to exercise the very smallest amount of pressure, which is sufficient to make the vapour "go to the ears." Should it be desired to limit the inflation as far as possible to one ear, the head is to be held to one side with that ear upwards, while the other is plugged with a finger of the patient or of someone at hand.

In several cases of most obstinate middle-ear catarrh, even where Politzerisation and the use of the catheter produced little or no improvement, this method has afforded a remarkable and most unexpected amount of benefit as regards hearing power, subjective noises, and fulness in the head. The instrument is made by Messrs. Krohne and Sesemann, Upper Wimpole-street, W.

DUNDAS GRANT, M.A., M.D., F.R.C.S. Eng.

CASUALTIES DUE TO FOG AND FROST.

THE following is a list of the cases, due chiefly to the effects of the recent fog and frost, which have either been admitted to metropolitan hospitals during the past week or treated in the out-patient departments.

London Hospital.

During the week which ended with Saturday last the following cases were treated. The cause of the accidents &c. is not noted in the receiving-room, but the officers on duty state that very large numbers resulted from the slippery state of the streets, as may be gathered from the following returns of the cases. The accident cases received into the wards or made out-patients consisted of 51 fractures, 6 dislocations, 24 sprains, 4 concussions, 13 contusions, 50 lacerated scalp wounds, and 1 rupture of the globe of the eye. The minor casualties treated, but not made out-patients, consisted of: Sprains or contusions of the shoulder, 23; of the elbow, 13; of the wrist, 23; of the fingers, 12; of the hip, 9; of the knee, 10; of the ankle, 24; of the toes, 6 of the back, 18; of the side, 23; of the jaw, 2; 8 lacerations of the finger, 4 of the face, 8 of the scalp, 5 of the forehead. In twenty-four hours—Dec. 25th and 26th—11 cases were seen of fractured radius either with or without fracture of ulna.

Westminster Hospital.

As the result of the fog and frost, the following cases of accident or illness have been received at this hospital. Admitted to the wards: Fractured femur, 2; fractured fibula, 1; fractured tibia, 1; injury to elbow, 1; injury to ankle and knee, 1; injury to head, 2. In addition, there were fully 25 surgical casualties on December 25th attributable to the frozen condition of the streets. In the medical department 8 patients are at present in the wards suffering from bronchitis brought on by the fog; and, in addition to these, 9 patients died between Dec. 22 and Dec. 27, of whom the deaths of 6 were either directly due to or accelerated by the state of the atmosphere.

The Royal Free Hospital.

The cases of accident or illness treated in the Royal Free Hospital as a result of the recent severe fogs and frost were very numerous indeed, the books of the institution showing a total of some sixty or seventy. The greater number were received between Christmas-eve and the early hours of Christmas Day, on which occasion two of the resident staff were up all night owing to the very serious nature of some of the cases. Three or four patients had to be admitted into the wards, the most serious being a man run over on the railway, whose leg had to be amputated, and a woman who fell in the street and injured her head. Among the number who were able to leave after treatment were four dislocations, six fractures of arm, and four fractures of leg, including the case of a cripple with a contracted leg.

St. George's Hospital.

From this hospital we learn that 17 cases of accident and illness due to the fog and frost were admitted as patients.

The Middlesex Hospital.

During the week ending Saturday, Dec. 26th, the surgical cases admitted into the hospital as in-patients whose injuries could in any way be traced to fog and frost were as follows: Scalp wounds, 4; fracture (jaw), 1; fracture (?skull), 1; fibula, 2; tibia and fibula, 2; and one man was brought in dead from apparently fractured base. This was the only death directly due to the causes mentioned. From Dec. 21st to Wednesday last 30 cases were admitted into the medical wards. These have included pneumonia 3, acute nephritis 2, bronchitis 12, 3 with heart disease (of whom two died), asthma 1. The bronchitic cases may certainly be attributed to fog, as also the deaths in heart disease with bronchitis. During the corresponding period there have been 13 deaths, about treble the usual number.

St. Mary's Hospital.

The fogs and frost of the last week were responsible for the admission into this hospital of twenty accident and five medical cases. Most of the accidents were on Christmas Day.

St. Thomas's Hospital.

The account we have received from this hospital does not give particulars of increased accidents during the recent exceptional weather. About twenty cases were treated in the surgery for accidents which occurred during the fog.

FOOTBALL CASUALTIES.—Whilst playing in a match on the 19th ult., between Blackpool South Shore and West Manchester, at Blackpool, a player fractured his leg below the knee. On the same day a young man, aged nineteen, playing in a match (the St. John's Club against the St. Paul's) at Bedminster Park, sustained a compound fracture of the elbow, and was removed to the hospital.

FOULING THE THAMES.—George and Robert Morgan and William Haimer were summoned at Staines Petty Sessions this week by the Thames Conservancy, for having emptied the contents of a cesspool into the Thames, just above the intakes of the Metropolitan Water Companies. The case was proved by a Conservancy official, and defendants were fined 50s. each.

THE LANCET.

LONDON: SATURDAY, JANUARY 2, 1892.

WITH the publication of the present number, THE LANCET enters upon its seventieth year. The coming and going of the years has been from time immemorial the occasion, to minds disposed to meditation, of pensive and salutary thoughts; indeed few, and not greatly to be envied, are those persons whose buoyant spirits carry them, without a pause for reflection, hurrying past the milestones of life. To most of us the closing of our annual volumes and the start upon a new year suggest superabundant matter for thought, and thought not untinged with sadness. Quite apart, however, from any question of the pleasantness or pain of indulgence in such reflections, there is a very definite gain to be secured—at least, in the case of those who are coöperating towards a common end—by pausing periodically to report progress, and revise the programme upon which the joint adventure is being worked out. It is in the spirit of this idea that we have been accustomed at the beginning of the year to take our readers into our confidence and to recapitulate for their information, not only events of a scientific and public character such as form the material for our *Annus Medicus* review, but also those matters of comparatively private interest which relate to the work and position of THE LANCET in the world. Indeed, the successive Editors, who have always been members of the family of its founder, the late Mr. WAKLEY, have ever cultivated the feeling that readers of THE LANCET are not only their supporters and subscribers, but also coöperators with them in the task of representing and recording the mind of the profession at large. The steady support of medical practitioners throughout the British Islands, and, indeed, throughout and even beyond the English-speaking world, has enabled them to establish and maintain an independent organ of professional opinion and intelligence, which is conducted in the interests of no party and no school, but contains so far as may be an exposition of all shades of opinion, and a record of all varieties of professional and scientific work. This ambitious object can only be in any measure attained by the willing coöperation of our professional brethren both at home and abroad; and it is the abundance of the aid thus rendered which makes us feel that some more or less confidential communication with our readers on the subject of our work is at this season in no way out of place.

It is, then, with the liveliest satisfaction that we realise that the representative character of THE LANCET has never been so well sustained as at the present moment. The gradual, in recent years the rapid, growth of the weekly number is of itself a testimony to the extent to which our pages are made the channel of intercommunication between the members of the medical profession. In the year 1887 the normal size of THE LANCET was ninety-six pages, although during that year it exceeded this bulk on all but two occasions; indeed, it once attained to 144 pages. Since that date it has received repeated enlargements, and during 1891 its normal bulk has been 112 pages, a size which will in 1892 be further increased to 120. The additional accommodation thus provided is, however, by no means a full, or, indeed, any adequate measure of the extent to which demands have been made upon our space. On no occasion during the past year has THE LANCET contained only 112 pages. Its average size, to be precise, has been 137 pages; on two occasions the numbers extended to 200 pages, and the present issue also contains 200 pages.

In another direction also the development of this intimate relation with the medical profession has been equally marked, for the manager reports that during 1891 his sales exceeded by upwards of 48,000 copies the corresponding figures of any previous year. These very remarkable facts show in a manner, which is highly gratifying to those who are charged with the conduct of the journal, that they have not laboured in vain to secure the confidence and good opinion of their professional brethren.

It is, perhaps, hardly necessary at such a time as the present to say that the Editors of THE LANCET are not engaged in private practice, and that it is with them an inflexible rule that no private interest is suffered to come into competition with their public duty as medical journalists. They have engaged in no speculations and attached themselves to no interests which could have the effect of shaping their course or affecting their policy in the conduct of THE LANCET; and they would regard any proceeding of that sort not only as the height of imprudence, as tending in some greater or less measure to fetter their independence and so imperil their position, but also as a serious breach of the duty which they owe to their supporters, whose confidence would certainly and justly be withdrawn if it were supposed that private motives were allowed, whether consciously or unconsciously, to influence the utterances of THE LANCET.

Passing now to our work in its various departments, we may allude, in the first place, to the large and most useful expansion which has taken place in recent times in our correspondence columns. As far as our readers are concerned, it is not easy for them to transgress the very wide limits of available subject matter, for nothing whatever of professional interest comes amiss in these pages. The result is too familiar to those whom we now address to stand in need of any description. Our correspondence columns contain not only the most comprehensive treatment of medical questions, whether scientific or ethical, but also a very large number of communications of the highest originality and importance. During the past year some 2990 pages have been devoted to this section of the journal, and it will, we think, be generally admitted that they have worthily exhibited the drift and movement of medical opinion.

Of the lectures, original and special articles, reports of societies, mirror of hospital practice, and editorial comments upon current topics, which have formed the staple of our literary matter from week to week, it is not necessary here to speak at any length, because that has been incidentally touched upon in the *Annus Medicus* article already referred to, since in some one or other of these

departments every one of the topics is brought before our readers which eventually make up the public record of the year's medical work. But any summary of the present kind would be incomplete which did not glance at the Special Supplements which we have from time to time produced in support of objects of special interest from a medical point of view. Foremost among these is the Hospital Sunday Supplement, which in 1891 was distributed in large numbers throughout the places of worship of the metropolis—some 100,000 copies were circulated in this way,—but 40,000 additional copies were also, at our suggestion, privately circulated by the medical practitioners of London among their wealthy and charitably disposed patients. The direct and visible result of this appeal was most gratifying, and contributed in no small degree to the marked success of the collection, a success that was attained under conditions distinctly unpromising, and such, indeed, as occasioned no little foreboding of failure until the actual result was made known. Of this we are able to speak with the greater freedom, because the result, which we are able to record with such unfeigned satisfaction, was distinctly due not to our skill or energy as medical journalists, but to the generous response made by our readers to the suggestion that they should personally interest themselves in promoting the success of the collection. They possess, as has been previously said, a special right to speak on such a subject and to urge the claims of charities which they support not only with money, but also with their services. It was not likely that their authority would be questioned if they chose to speak on such a theme. We knew, and the public also now knows, that the medical men of the metropolis are prepared to support with their good word the medical charities with which they are associated, both within the routine of professional service and without that routine. This is as it should be, and it is gratifying to be able to add that when thus approached the public will be found prepared to respond in a generous manner, and to extend an ungrudging support to institutions whose claims are avouched not only by well-disposed patrons, but also by competent critics. This is a consideration which will not be lost sight of, either by our readers or ourselves, when the occasion for a new Supplement comes round.

Nor must we pass wholly without remark the Special Supplement which was issued in November last dealing with life assurance and the medical profession. That this is a subject which merits more attention than it has heretofore received is made evident both by the facts which are constantly coming to our knowledge in connexion with the administration of THE LANCET Relief Fund and also by the concessions and advantages which it has proved possible to secure for medical men by the simple process of asking for them. It will, we hope, prove in the end that medical men have gained, not only in increased facilities for life assurance, but also in an awakened sense of its importance and advantage through the ventilation of the topic in our columns.

This survey of the past year leads naturally to the reflection that the year upon which we have just entered will make its own demands upon us all, writers and readers alike, and that to meet and satisfy those demands will require a continuance of the coöperation which has brought about in the past the results here recorded. Speaking for ourselves, we shall spare no effort to rise to the occasion as it presents itself, and we shall look with assured confidence to our subscribers to renew their support. The objects which we have in common are not personal, nor are they merely professional. They touch the largest and most abiding interests of our neighbours as well as of ourselves, and in working for success in the task to which we have set our hands we are also working for the common good. In this connexion we would allude to that excellent institution the Epsom Medical Benevolent College, and must express our regret that its treasurer, Dr. HOLMAN, has not so far been as well supported as he deserves to be in his plea for the pensioners. We would again direct the attention of our readers to the claims of this excellent medical charity, and may add how pleased we shall be, when the conditions are fulfilled, to be called upon to pay our promised £1000.

We must also mention the International Congress of Hygiene recently held in London, when with an army of reporting experts we were enabled to publish the fullest and most scientific report which appeared of the proceedings of that historical meeting, extending as it did to nearly 200 pages of THE LANCET, and consisting of highly technical and important matter. We also republished in pamphlet form all the reports which had appeared in THE LANCET of previous meetings of these Congresses, copies of which, to the number of 2000, were presented to those members who took part in the Congress.

THE devotees of medicine have this great satisfaction, that the science which they pursue is a progressive one. It does not profess to be based on revelation, like theology, and it is not fixed and settled in its principles as is the law. Medicine is not only progressive, but it progresses by leaps and bounds. To men not yet very old the changes in the fundamental conceptions of medicine seem enormous, and there is no reason to think that we are at all near reaching finality. In a very lucid and instructive graduation address on the service rendered to mankind by medical science, Professor RUTHERFORD remarks how late has been her advance. For centuries she was a slave to names. GALEN was her god. But such physiological discoveries as HARVEY'S and such chemical work as PRIESTLEY'S broke the charm of mere authority, and taught men to look to nature herself and to investigate her secrets. And the result has been that in the last 120 years, and especially in this century, the progress has been enormous. We endeavoured in our summary of last week to show what had been done in the short twelve months, and it may safely be said that the record of work involved an amount of saving of life, of limbs, and of pain which would be incapable of being understood by anyone who had twenty-five years since abruptly ceased to study medicine. The encouraging thought at the opening of another yea is that there seem to be far greater gains in prospect for the earnest student of medicine than even those which have yet been realised. Whole regions of disease invite investigation, and promise to succumb before the defined and determined attacks of recent science. We are all the wiser this year for the great disappointment of last. It has taught us perhaps

to be slower in our conclusions, but it has not in any degree lowered the prospect of ultimate success. The impression already made on large bodies and classes of men in regard to the risks and incidence of phthisis and the increasing number of reports of recovery in individual cases are enough of themselves to make us hope that tuberculosis itself will be brought more under the control of medicine, and the insanitary conditions which lead up to it and make it possible will be gradually reduced under wise and beneficent legislation. This is still the greatest problem before physicians, as the disease to be mastered is the most disastrous to the sufferer and the most discreditable to the profession. Like that of the specific infective diseases, it will require the coöperation of various scientific workers for its elucidation. And this is the happy case of Medicine, that she is served by chemists and physicists and biologists of every kind, and that all are eager to do for large groups of diseases what has already been done so brilliantly for others. The somewhat discouraging note that has been struck of late by one or two physicians in reference to the arrest or non-curability of phthisis has not been responded to by the profession, and is not likely to be. Professor FINLAY has just published a case of recovery from tubercular peritonitis and double pleurisy, read to the Clinical Society, and properly makes much of the more hopeful tone, as respects tubercular peritonitis, of physicians in recent days as compared with that of physicians of a former generation.

As we have suggested, the hope of progress in regard to the nature and properties of the specific infections in the near future rests much on the work of men of research in the regions of chemistry and biology. It is to be lamented that there has been so much in our law that has hindered the natural tendency of Englishmen to come to the front in these investigations. But, as Professor BURDON-SANDERSON lately said, there are signs of improvement. The laboratory of the combined London Colleges is a living proof that they mean to encourage such researches. They could not make a higher use of their resources. And the pressure and dread of unpleasant forms of disease will, we must hope, gradually induce the Government and the Legislature to relax those so-called antivivisection laws which are discreditable to the intelligence of the British public. Small-pox—the *bête noire* of the English public—happens to be in abeyance just now, and this fact is making them faddish in regard to the value of the one great fact and discovery of British preventive medicine. But there is another disease that is showing increased virulence that may well frighten the public into its senses and induce it to give a free hand to those who are prepared at all personal risks to investigate it. We refer, of course, to diphtheria. Twenty years ago this disease was scarcely ever seen in some parts of London and in other large towns. Now it is a veritable scare. It must be confessed that our knowledge of its origin, its nature, its relation to other infections and other diseases of man and animals, and of its mode of propagation, is very vague. Many members of the profession, most of them brilliant and promising, have fallen victims to their duty in connexion with

Many more are prepared to take all risks. If the Legislature will do its duty, the profession will soon throw more light on this difficult question. We have said that much depends with regard to medical progress on the research section of our profession. But much, too, still depends on those in general practice. Take this very disease of diphtheria. Who but general practitioners can give an account of first cases, of their relation to other diseases in man or animals, and of their behaviour under treatment? We confidently hope that the year 1892 will be a satisfactory one to all classes of practitioners, and that some of the more obscure and intricate problems of disease will receive elucidation, if not solution, ere it too, in its turn, is numbered in the ranks of the passed.

AT the Assizes held at Liverpool on the 9th ult., before Mr. Justice LAWRANCE, SAMUEL CRAWFORD, aged nine, and ROBERT SHEARON, aged eight, were placed at the bar charged with the murder of DAVID ECCLES, aged eight years and a half. From the evidence, as given in *The Times* of the 10th ult., it appears that on Sept. 7th SHEARON had played truant, and that as a punishment his mother deprived him of his clothes, locked him up, and ordered him to remain in bed. She had occasion to leave the house, and on her return she found that he had gone out without his clothes. He was seen by a witness with a portion of a coat over his shoulders and an old sack wrapped round his loins. The statements made by the two boys after they were in custody show that they lifted the deceased over the hoarding of some unfinished and abandoned buildings, in the excavated cellarage of which water had collected, the enclosed waste ground being used by boys for romping and playing purposes. They then asked him to go on the plank; they then pushed him off into the water, then dragged him out and took the clothes off him and pushed him in again twice. He fell face downwards in the water. CRAWFORD got on his head and kept him under for five minutes, and waited to see whether the lad stirred. They then took the boy's clothes and threw his boots into the pit. The prisoners wanted to steal the lad's clothes. That night SHEARON went home wearing clothes which were identified by the mother of the deceased as having been worn by him on Sept. 7th. The next day the body of ECCLES was found lying in the water in the basement of the unfinished building face downwards, naked and dead. After the finding of the body, inquiries were made which resulted in its identification, and publicity led to the mother of SHEARON giving information to the police which implicated the boy in the matter. The prosecuting counsel, after detailing the facts, said that the law as to the capacity of infants to commit crime, though clear, was perhaps not very exact. Up to seven years of age a child was incapable of committing crime. From seven to fourteen the question would be, Did they know the nature and quality of the act? The nearer seven years the more exact and precise the proof of such knowledge and malice must be. The counsel for the prisoners submitted a twofold defence: first, that it was not made out that the prisoners took the life of the lad ECCLES; and secondly, supposing the jury arrived at the finding that they did, then his defence was that the boys were not conscious of the nature and quality of their acts and of their moral gravity. The learned judge, in summing up, approved the

law as stated by counsel: between seven and fourteen the prosecution must prove that the prisoners were capable of committing crime by some indications of knowledge or cunning.

Eventually both CRAWFORD and SHEARON were found to be guilty of having committed the act, but not to be responsible on the ground of their youth. It is further stated that the judge entered the finding as "Not guilty." We are told that the prisoners looked quite infants, and that SHEARON'S head hardly topped the front of the dock.

To be "not guilty" under such circumstances could only be the result of privilege, and fortunately, by an arbitrary rule as to age, the law is able to preserve its dignity without perpetrating an outrage upon common sense and popular feeling. Yet it was not always so: for Sir MATTHEW HALE gives two instances where the death penalty was exacted before puberty. One case was that of a girl of thirteen who was burnt for killing her mistress, and the other was that of a boy of ten, who was hanged for killing his companion. BLACKSTONE gives an instance in the last century where a boy of eight years old was tried at Abingdon for firing two barns, and it appearing that he had malice, revenge, and cunning, he was found guilty, condemned, and hanged accordingly. In more modern times a boy of ten was convicted on his own confession of murdering his bedfellow, there appearing in his whole behaviour plain tokens of a mischievous discretion.

According to the law of England, in order that an act may be criminal it must be done by a person of competent age. BLACKSTONE says that infants under the age of discretion ought not to be punished by any criminal prosecution whatever. With regard to capital crimes, by the ancient Saxon law the age of twelve years was established for the age of possible discretion "when first the understanding might open," and thence till the offender was fourteen it was *ætas pubertati proxima*, in which he might or might not be guilty of a crime, according to his natural capacity or incapacity. Under the age of twelve it was held that he could not be guilty in will, neither after fourteen could he be supposed to be innocent. Since the time of EDWARD III. the law appears to have been more desirous to measure the capacity of doing ill or contracting guilt by the delinquent's understanding and judgment rather than by any specific age after the age of seven was reached. Under seven years of age an infant cannot be guilty of felony, for then, as BLACKSTONE says, a felonious discretion is almost an impossibility in nature; but at eight years old he may be guilty of felony. The same author says that under fourteen, though an infant shall be, *primâ facie*, adjudged to be *doli incapax*; yet, if it appear to the court and jury that he was *doli capax*, and could discern between good and evil, he may be convicted and suffer death.

In relation to the question of responsibility, according to the French criminal law, there does not appear to be any age at which a child is absolutely exempt from punishment. If an offence be committed under the age of sixteen, and it be found to have been committed "without discernment," the offender is to be acquitted; but, according to circumstances, he is to be returned to his relatives, or placed in a house of correction, to be brought up there and detained for any number of years not exceeding his twentieth. By the criminal code of the German empire, a person cannot be criminally prosecuted for any offence committed before he ha completed his twelfth year.

In his "History of the Criminal Law of England" Sir JAMES STEPHEN expresses himself as follows:—"By English law children under seven are absolutely exempt from punishment, and from seven to fourteen there is a presumption that they are not possessed of the degree of knowledge essential to criminality, though this presumption may be rebutted by proof to the contrary. Like most other presumptions of law, this rule is practically inoperative, or at all events operates seldom and capriciously. My own opinion is that the age of complete irresponsibility should be raised, say, to twelve (except in the case of a few specially atrocious crimes), and that it should be succeeded by complete responsibility." This definite expression of opinion by an authority of such eminence and experience must carry great weight.

There are many points in the Liverpool case of CRAWFORD and SHEARON that are of deep interest from a psychological and social standpoint, the question of conspiracy between two delinquents being not the least. We shall take an opportunity later on of referring again to this case. Meanwhile we may be allowed to express a hope that, as the boys have been sent to homes with the sanction of their mothers and under the enlightened rule of modern law, their future life may not be overshadowed by reflections of their recent experience, and that their future behaviour may be such as to justify the steps that have been taken for their welfare.

THE opening of the fever hospitals last year for the purposes of clinical instruction and study was an event of the highest importance to medical education, and it did not come before it was required. The want of due provision for teaching the diagnosis and management of the common infectious fevers of the country had for several years been a source of great anxiety to all thoughtful teachers of medicine, and it was felt not to be without grave risk that so many students were placed upon the Register who were almost, if not entirely, without experience and knowledge of this most important part of their work. In former years, when all cases of fever as they came were admitted into the general hospitals, students had ample opportunity of gaining the requisite knowledge; but when in the course of time the general hospitals decided no longer to admit such cases, students had to seek their knowledge elsewhere, and they found that at the only places—viz., the fever hospitals—where the necessary experience could be gained the doors were closed against them, and, strange to say, by Act of Parliament.

A clause in the Poor Law Act of 1867 permitted the fever hospitals as well as the infirmaries to be used for the purposes of clinical instruction and study; but in 1869 this clause was withdrawn and a prohibitory clause introduced. How and why it is difficult to ascertain. It is, at any rate, satisfactory that no one can be found now to acknowledge the responsibility for this retrograde step.

In 1890 the College of Physicians, with the cordial coöperation of the Metropolitan Asylums Board, under

whose management the fever hospitals of the metropolis are, approached the Government, and succeeded in obtaining from Parliament the abolition of the prohibitory clause. Rules and regulations against the carrying of infection were drawn up by the College of Physicians and adopted by the Metropolitan Asylums Board. Classes under the direction of the superintendents of the various fever hospitals were arranged for and have been successfully held, but up to the present not largely attended.

It is to be hoped that before long a course of instruction in the diagnosis and management of fevers will be an essential part of medical education and a condition *sine quâ non* of registration. At present attendance on such a class is merely voluntary, and amid the press of work there is a danger that what is not insisted upon will be regarded by the student as of comparative unimportance, and be neglected. A great deal, however, can be done if teachers of the different schools will take the trouble to bring prominently before their pupils the absolute necessity of such a course, and experience proves that where this is earnestly done students will be ready to act upon the advice given. Thus, out of twenty students who attended the courses during the few months that the fever hospitals have been accessible to them, no less than sixteen came from one school, while not one of nine of the metropolitan schools sent a single student. This is doubtless due to the fact that the importance of attending these courses was not brought home as it should have been to the students, who are, as a rule, ready enough to take good advice when it is given them by those they regard. It is earnestly to be hoped that in this coming year all the schools will do their duty equally in this respect.

The need of such instruction in fevers at the present time is self-evident, and the want of proper knowledge is amply shown by the figures recently laid before the Asylums Board. From these it appears that the mistakes in diagnosis during the past twelve months were far above a permissible percentage.

With the Compulsory Notification Act in force the consequences of error become more than ever serious alike to the medical practitioner, the patient, and the public. To the public failure in recognising an epidemic disease, such as scarlet fever, or, still more, small-pox or typhus, may mean not only widespread diffusion of the disease and the loss or damage of many lives, but also, what Boards and Vestries least of all forgive, great expense to the district. On the other hand, to the patient the diagnosis of some infectious fever wrongly may mean the exposure of that patient to great risk of infection, with possible loss of health or life; while in either case the reputation of the medical attendant must seriously suffer when the consequences of his error are so publicly known.

The fever hospitals of London provide ample material even should every student be compelled to take the prescribed course of instruction. There are something like 10,000 cases annually in the six hospitals under the management of the Asylums Board. At each of these hospitals the necessary arrangements have been already, or will be shortly, completed. Three, at any rate, are at the present moment in full working order—viz., the Eastern, the South-Western, and the Western; and at these provision is made for a succession of courses of instruction of two months' duration, according to the number of students applying. The course consists of three demonstrations weekly for a period of two months, at the end of which time a certificate is given if the attendance has been satisfactory. This certificate, it is needless to say, cannot fail to prove of the greatest value to the holder when presenting himself as a candidate for public appointments. The times of the demonstrations are so arranged that they interfere as little as possible with ordinary hospital work. Explicit rules have been carefully drawn up so as to reduce to a minimum the risk of carrying infection to others. These rules are strictly insisted on, and any breach of them would involve serious consequences to the student at his own school. All that a student need do if anxious to attend these courses is to obtain from the dean of his school a certificate or statement that he is of such standing as to be eligible, and to present himself with the certificate at the office of the Asylums Board, Norfolk House. Here, on payment of his fee, he is given the choice, as far as possible, of the particular fever hospital he would prefer, he receives a card stating the days and hours he must attend, and a copy of the rules and regulations to which he is subject, and, at the end of his course, he receives a certificate signed by the officer who has instructed him. The material at these hospitals is enormous, the instruction excellent, and everything has been done to render study there profitable and convenient. The profession owes a debt of gratitude to the committee of the College of Physicians for their energy in raising the whole question, in thrashing out the details of the scheme, and in obtaining the necessary Act of Parliament. It owes very much also to the managers of the Metropolitan Asylums Board for the public spirit they displayed, for their cordial coöperation, and for the despatch with which the necessary arrangements were completed. It would be a disappointment to both of these bodies if full advantage were not taken of the opportunities now offered to the profession. The more students there are, whether qualified or not, at the fever hospitals, the better pleased the managers will be; and should increasing numbers demand increased accommodation, it will doubtless be forthcoming.

The course of instruction in fever will probably ere long be made compulsory, and rightly; for, under the Notification Act, the first duty a student may be called upon to discharge after qualification may be to make a diagnosis of one of the fevers, with all the responsibilities this diagnosis carries with it, and all the risks to himself and the public which an error involves. Formerly medical students were taught the diagnosis and treatment of the common infectious diseases during their apprenticeship, and one of the most important parts of a medical man's education has undoubtedly suffered from the changes caused by the medical legislation of the past twenty years, which no longer compels them to follow such a course. The necessity in the interests of the public of making a course of instruction in fevers compulsory is consequently generally acknowledged, and this will doubtless soon be done; but so long as the course remains voluntary it is to be hoped that the teachers at the metropolitan schools, upon whom the responsibility of directing the instruction of the students rests, will do the duty which is clearly theirs in urging

upon the students the wisdom and necessity of acquiring as complete a knowledge as possible of the infectious fevers before assuming the responsibilities of practice.

Annotations.

"Ne quid nimis.'

THE QUEEN'S VISIT TO HYÈRES.

HER MAJESTY THE QUEEN has elected to visit this year the oldest of the Riviera health resorts. Long before Cannes and Nice were known to fame Hyères was frequented by invalids and persons of delicate health. It has always been a quiet place, where people went for health rather than for enjoyment. But to those who find their pleasure in the beauties of nature, Hyères, by reason of its climate, its vegetation, and its numerous attractive surroundings, will afford many inducements and much relaxation. Hyères is at once the most southerly and yet the nearest of the French winter resorts. It is situated on latitude 49·7° North, and is sheltered by the Maurettes and the Maure mountains. Dr. Williams mentions eighteen different flowers that bloomed earlier at Hyères than at Cannes, and it is from the Hyères market gardeners that the first spring vegetables reach the Paris market. The climate of Hyères is more sedative than that of most of the Riviera resorts. The town stands at a distance of about three miles from the sea, and thus its inhabitants escape alike from the exciting and sometimes injurious effect of exaggerated dryness and from the saline breezes of the Mediterranean. Many patients who cannot sleep at Cannes or Nice enjoy good repose at Hyères. But Her Majesty proposes to stay at a little distance from the town, and much nearer to the sea. Indeed the climate of Costebelle is very different from that of Hyères. The district known as Costebelle is on the summit of a low range of pine-clad hills, whilst Hyères is at the foot of a precipitous rock. At Costebelle there is the balsamic influence of the pine trees and the more stimulating air, due to its higher position and its proximity to the sea. Hyères is a small place, but Costebelle is simply a hill and a wood, with two hotels on the summit, and a few villas dotted here and there. Sanitation, in such a country district, assumes its simplest form; but, as nearly all the visitors to Costebelle are English, doubtless good care has been taken to adopt the best available measures for the preservation of health. The country around is rich in vegetation and in points of view that constitute the object of delightful excursions, and there is every reason to believe that Her Majesty will be well satisfied with Hyères and its neighbourhood.

INFLUENZA.

THE record of the past week shows no abatement in the influenza generally, for although it is leaving some districts in this country it is invading other parts. Thus it is abating in Scotland, Aberdeen being one of the last places to be its seat; and Dr. Matthew Hay, the medical officer of health, in his report to the town council, strenuously urges the adoption of measures of isolation. In Newcastle and the vicinity it still persists; indeed, one feature of this outbreak, as contrasted with that of two years ago, is the length of time in which the disease seems to linger in one locality. Thus it has not yet ceased to occur in Cornwall and Devon—where the earliest cases of this present epidemic arose,—and it has been conveyed to the Scilly Isles, where almost all the inhabitants have suffered. The affection at the present time is very rife in East Kent—Canterbury, Dover, and Folkestone being especially centres of it. From Dover, indeed, comes a report that the local authorities have imposed a fine of £5 upon any one suffering from influenza who exposes himself in a public place. We fear this measure — if it really be taken — will not do much to limit the spread of an affection which, though admittedly contagious, is also, according to high authorities, miasmatic. It is also prevalent in Bedfordshire. The metropolis is still free from any severe outbreak, but that influenza has a certain foothold in London is seen by the fact that during the week ending Dec. 26th nineteen deaths were directly attributed to it, an increase of two over the preceding week. The mortality from diseases of the respiratory organs last week in the metropolis was greatly in excess of the average—no doubt owing to the prolonged fogs,—and the total death-rate rose to 21·9. In Newcastle last week the death-rate was as high as 45·1 per 1000. Abroad influenza has appeared in Italy, epidemics being notified at Rome, Turin, Florence, Milan, and Bergamo. It is said not yet to be really epidemic at Vienna, although several sporadic cases have occurred there, and it is increasing steadily. There has been an outbreak on board H.M.S. *Dreadnought* at Malta. At New York it is averred that the disease has attacked the monkeys in the zoological collection there.

DEATH OF PROFESSOR JOHN WOOD.

WE regret to announce the death of Professor John Wood, F.R.S., which took place at his residence in Wimpole-street on the 29th ult. Arrangements have been made for the funeral to take place at Kensal-green on Monday, Jan. 4th, at two o'clock. Mr. Wood's professional life was spent at King's College and King's College Hospital. In 1846 he entered the medical department of the College, in 1851 he was appointed Demonstrator of Anatomy, in 1870 Professor of Surgery in succession to the late Sir Wm. Fergusson, in 1777 joint Professor of Clinical Surgery with Sir Joseph Lister, and in 1889, on his resignation, he was made Emeritus Professor in King's College and Consulting Surgeon to King's College Hospital on account of his valued services to those institutions.

A NEW AND POWERFUL LIGHT.

A VERY intense light, such as is required for photographic or occasionally for medical purposes, may, as is well known, be readily obtained by burning magnesium ribbon, which has, however, the disadvantage of being somewhat expensive. An excellent substitute has been found by a French chemist, M. Villon, in aluminium, which is about a third of the price of magnesium, and which may be utilised in the same manner by burning it in a spirit lamp, or, if a flame of much more intense brilliancy is required, in a coal, gas, or spirit flame supplied with a jet of oxygen. In these it burns without emitting fumes, in which respect it is superior to magnesium. The light given by aluminium has a high actinic power—nearly as high, indeed, as that of magnesium. The most convenient way of obtaining a very intense light, according to M. Villon, is to use a lamp provided with a jet of oxygen at the centre of its flame, into which powdered aluminium mixed with a quarter of its weight of lycopodium and a twentieth of its weight of nitrate of ammonium can be projected by means of a tube furnished with an air-ball. This gives an exceedingly intense light, without smoke. A mixture of aluminium powder with chlorate of potash and sugar can be ignited, giving an intense light by means of gun-cotton, but is somewhat dangerous. Probably the best plan for medical photography, or for laryngoscopic and auroscopic and other demonstrations, would be to burn

a ribbon of aluminium in an ordinary spirit lamp. Of course, if oxygen and an oxy-hydrogen, or a oxy-alcoholic, lamp were at hand a much more intense light could be obtained.

THE ACCIDENT TO PRINCE CHRISTIAN.

WE have received the following from an official source:—On Saturday, Dec. 26th, H.R.H. Prince Christian, whilst shooting in the grounds of Osborne, was struck in the left eye by a shot. He was at once seen by Dr. Reid, who, finding that the shot had penetrated the globe, telegraphed for Mr. Lawson. On the following morning (Sunday) Mr. Lawson, assisted by Dr. Reid and Dr. W. Hoffmeister of Cowes, removed the injured eye. The Prince has progressed very satisfactorily. The anæsthetic used was the A.C.E. mixture.

DOES ETHER ASSIST DIGESTION?

THE effect of ether on the digestive processes in healthy subjects has been recently investigated by Dr. Gurieff, who gave thirty drops of sulphuric ether to six healthy persons during dinner, which consisted of about half a pint of soup, four ounces of meat, and six ounces of bread. It was found that the ether had the effect of stimulating the action of the gastric glands, increasing the free hydrochloric acid in the gastric juice, and causing the peristaltic movements of the stomach, together with its power of absorption, to increase thus; on the whole exercising a favourable effect upon the gastric digestion. The same result was obtained when the ether was administered by means of hypodermic injections. It would appear, therefore, that the effects must be ascribed to a general rather than to any merely local action on the mucous membrane of the stomach. Dr. Gurieff is disposed to think that there is a stimulation of the cephalic centres. This view is partly based on the observations of other Russian observers—Bekhtereff and Miloslevski, and Pavloff and Shumova-Simanovskaya—on the dependence of the gastric functions upon the central nervous system.

SANITATION AT FLORENCE.

SIR DOUGLAS GALTON, in his report on the sanitary condition of Florence, confirms in every sense the description given of the sanitation of Florence by our special commissioner, which we published on Jan. 7th, 1888. Our commissioner, like Sir Douglas Galton, did not find fault with the public water-supply of Florence, but he denounced the continued use in some houses of private well water. It was with regard to domestic drainage that the greatest complaint was made. Untrapped, unflushed closets, porous drain-pipes, and abominable cesspools, often ventilating into bedrooms or kitchens, were described and declaimed against. Our commissioner sent drawings of the main sewers—big, awkward structures, with broad, flat inverts, and insufficient means of flushing. He also mentioned that some of the newer sewers were being built in the egg-shaped and modern manner. We are glad to hear that the number of these latter has been increased since the publication of our commissioner's report. But, still, the fundamental grievances which he denounced four years ago seem to remain. The question of domestic drainage is neglected now as in the past, and is "sufficient to account for the spread of typhoid fever." On the other hand, the quarters of the town where new drains have been built and where the house sanitation has been improved escaped from the recent epidemic of typhoid fever. Thus the complaints we made, the warning we gave, at the commencement of the year 1888 have been entirely justified by the events which have since occurred, and by Sir Douglas Galton's recent report. We trust therefore that the municipal authorities of Florence will take action. We know that their position is exceptionally difficult. Once capital of Italy, but now reduced to the level of a provincial town, Florence has greatly suffered as respects her local budget, and doubtless the municipality would do more if it only possessed the financial means. But much good sanitary work can be accomplished without very large outlay; and the interior condition of houses could be altered mainly at the expense of the owners. In this respect, the municipality of Florence cannot do better than follow the example of the municipality of Brussels, where the same difficulties have been overcome in a most radical and successful manner.

FIRST AID BY CHEMISTS.

WHEN a person meets with an accident in the street it is a common practice to take him to the nearest chemist's shop; and this custom prevails not only here, but in other countries, where the laws against counter practice are much more definite and severe than with us. In the Argentine Republic regulations are actually laid down for the guidance of pharmacists under such circumstances. Only the proprietor of the shop may attend to accidents, and he only to those which are quite recent. For washing the wound he must use either a 4 per cent. solution of boracic acid or a ½ per cent. solution of salicylic acid. No sponges may be used, but only pieces of absorbent wool. Hæmorrhage must be arrested by pressure with moist cotton wool or by compression of the artery. The edges of a wound are to be drawn together, but not completely so, by sticking-plaster; over this a layer of cotton must be put, and the whole retained by a gauze bandage. When there is a loss of substance, so that the edges of the wound cannot be brought together, the wound must be sprinkled with iodoform to the thickness of about half a millimetre. Burns are to be covered with cotton or linen soaked in carron oil. In simple fractures strips of cardboard covered with cotton wool are to be applied. No other substances—such as carbolic acid, perchloride of mercury, or amadou—and no charpie or calico bandages are on any account to be applied to wounds by the pharmacist, who must be careful to tell the patient to get the advice of a doctor as soon as possible. How would our chemists like to be obliged to conform to regulations of this character

FROST, FOG, AND SMOKE.

THE connexion between frost and fog, and its mischievous capabilities, have seldom known a more striking illustration than that afforded by the weather conditions which prevailed last week in the metropolis. To much public and private inconvenience of other kinds we must add the injury sustained by trade at a season which is for many shopmen the busiest in the year. Custom lost at such a time is not recovered, and we may regard it as certain that the Christmas takings for the year just ended would show on examination a depression markedly related to the suffocative gloom which a few days ago enshrouded the city. This, however, is but a secondary circumstance in comparison with other and more directly vital consequences. The loss of life primarily due to the fog has been considerable. Last Thursday week no fewer than eight inquests were held upon the bodies of persons who had been drowned in the docks from sheer inability to see their way. In no instance was there any reasonable suspicion either of suicide or intoxication. Four of the eight men who thus perished moreover were dock employés, and therefore presumably familiar with the roadway under ordinary conditions. The obvious necessity of such an arrangement of chain-barriers as would prevent similar accidents in future should not require

to be impressed upon dock authorities. We give in another column some statistics of fracture and contusions which by the courtesy of the secretaries we have been able to obtain from the various metropolitan hospitals—casualties largely attributable to the causes already mentioned. The marked prevalence of asthma and bronchitis may also fairly be traced to the same sources. Every practitioner has lately had occasion to deal with cases of this trying and dangerous malady. What is of especial importance after its cure, if present, is the prevention as far as possible of the cause to which both it and the accidental deaths we have recorded are mainly attributable—the fog. Of late the press has been fruitful of suggestions respecting this matter. All of course agree in condemning the ordinary coal fire, which is a main source of mischief, and it must be admitted that some of the substitutes proposed in its place bear the mark of practical intelligence. The well known utility of gas for heating and cooking purposes requires no commendation where conditions admit of its employment. Unfortunately, there frequently exists a serious difficulty as to this during frosty weather. Otherwise no better preventive of the fog atmosphere could be found. It is possible, however, even while using coal, to use it in such a form and way as materially to diminish its power of smoke production. For this purpose a non-bituminous coke or anthracite is clearly preferable, and is capable of imparting great heat if the grate be furnished with firebricks in the manner suggested by Dr. George Wyld. Most of our readers are familiar with the construction of the slow fire which burns from above downwards, the draught from below being stopped by a metal plate. By the use of either of these methods it is possible to maintain a fire suitable for all ordinary purposes, and possessing an obvious advantage in the fact that it certainly emits a much less than ordinary volume of smoke. It has been proposed that the duty of smoke consumption where coal is burnt should not be enforced in the case of manufactories only, but that the larger kitchens of clubs and hotels should be equally liable. The suggestion, if novel, is certainly reasonable enough. It is, indeed, unquestionably desirable. Whatever the method most approved, however, it must be allowed that the time has come when every possible effort should be made to abolish the fog-tyranny with which we have been in so recent and ruinous association.

TUBERCULIN AT THE BROMPTON HOSPITAL.

A REPORT has been issued from the Hospital for Consumption and Diseases of the Chest, Brompton, upon the results of the treatment of cases of phthisis and lupus by tuberculin. The remedy was used systematically for four months from Dec. 6th, 1890, to April 5th, 1891, during which time 30 patients were so treated; 28 of these were phthisical (18 males and 10 females). The report gives in a succinct manner information of the nature of the cases, the condition of lungs and expectoration, the number of the injections and their results as to reaction, temperature, cough, and expectoration, changes in physical signs, in general condition, and in body weight. It is stated that 15 improved under the treatment, or 53·6 per cent.; one was stationary, and 12 grew worse (3 deaths), or 42·8 per cent. As to weight, 53·5 per cent. gained in this respect, 14·2 per cent. were stationary, and 32·1 per cent. lost weight; but this result is qualified by the fact that the cases were selected for their being either early or limited in character and extent. The reporters admit that tuberculin speedily causes inflammatory changes in and around tubercular lesions, thus promoting the formation of cavities, as proved by the appearance of lung tissue in the sputum and by cavity signs replacing those of consolidation. It increases the amount of expectoration, but there is no proof of its diminishing the number of bacilli in the sputum; in some cases they apparently increased under its use. In many cases the injections were followed by signs of distinct extension of the disease. The "reactions" were exhausting, and caused loss of weight and strength. "The treatment is specially contraindicated in lung tuberculosis accompanied by pyrexia, as likely to convert intermittent into continuous pyrexia." In two cases there was evidence of fibroid contraction of cavities accompanying the use of tuberculin. The final judgment is—"That the tuberculin did not favourably influence the course of the disease in the majority of cases; that in some the effects were detrimental; and that even in the stationary and improved cases it was difficult to ascribe any distinct improvement to the injections, which might not have been equally attained under the treatment ordinarily employed in the hospital." The report is signed by Drs. Theodore Williams and Tatham. A report on two cases of lupus treated by tuberculin is appended by Mr. Godlee. Both cases "showed marked temporary improvement, followed by a return towards, if not actually to, the condition preceding the commencement of the treatment, when the injections were stopped; and that even before stopping the injections, the retrogression had already set in."

EXPLORATION OF KAFFIRISTAN.

HEROISM has been so connected with deeds of valour in the battle-field that we are apt to overlook that higher heroism which is the innate result of self-sacrifice undertaken for the advancement of science and for the benefit of mankind. The Indian correspondent of the *Daily Chronicle* records such an instance in the case of the explorations in the wilds of Kaffiristan by Mr. G. S. Robertson, Agency Surgeon at Gilgit. "His experience among that hitherto mysterious people will be most interesting and valuable. At one moment an honoured guest, at another surrounded by crowds of frantic savages clamouring for his blood, he established his supremacy by the calm audacity which distinguishes the British race. Armed with no authority, backed by no escort, but relying solely on his own determination and coolness, he has been the first British subject to explore that wild country."

SEWERS OR CESSPOOLS FOR CHICHESTER.

THE Corporation of Chichester seems likely to adopt a very retrograde step—namely, one which will tend to perpetuate a system of leaking cesspools, instead of adopting a method of sewerage for the city. One of the members of the Corporation is alleged to have stated that with a cesspool the only danger is that "occasionally the air is made to smell a bit," and this in a town where the contents of 2440 privy-pits and cesspools are allowed to soak away into the soil on which the place is built, and where about 816 houses are dependent for water on wells sunk in this soil. Then, again, it was advanced that cesspools can be kept out of houses, whereas "sewers had to be laid under them." Whether house drains pass to cesspools or to sewers, the only difference in this respect lies in the fact that since the cesspool must almost always be constructed on the premises to be drained, whilst the sewer is in the public thoroughfare, the sewer is, as a rule, farther away. Moreover, the question of drains passing under a house or not depends entirely on circumstances which are distinct from their outfall being into sewer or cesspool. Views of the above sort were applauded by a number of town councillors, and hence it is not astonishing that they elected to try a system for pumping out the cesspools of Chichester by means of ap-

paratus which was adapted only to cesspools containing liquid contents; and to get over the difficulty due to the fact that Chichester retained the more liquid of its cesspool filth in its own soil, it was provisionally announced that before beginning the pumping processes, liquid was to be mixed with the more solid contents of the Chichester cesspits. A final effort to upset such proposals was rejected by one vote. Under these circumstances it is not to be wondered at that, at a subsequent meeting attended by some of the leading medical practitioners of the city, it was decided to make formal complaint to the Local Government Board, under Section 299 of the Public Health Act of 1875, to the effect that the sanitary authority had made default.

ARTIFICIAL TEETH FROM A HYGIENIC POINT OF VIEW.

IT is common experience amongst dentists that a very large majority of artificial dentures worn are discoloured and by no means devoid of unpleasant odour. This lack of cleanliness, which arises sometimes from neglect, but often from want of instruction on the part of the dentist as to the necessary *modus operandi*, is a fruitful cause of inflammatory conditions. Débris of food mixed with saliva and mucus accumulating on a plate rapidly undergo decomposition, with the result of irritating the mucous membrane and producing a general inflammation of the oral cavity. The oral secretions become altered and vitiated, so as to cause dyspepsia, and caries of the remaining natural teeth is set up, which proceeds with great rapidity, especially in "clasp" dentures, not from the friction, but because the inside of the clasps most generally escape the brush. The materials used in the construction of artificial dentures differ widely in their effect upon the tissues with which they come in contact. A larger number of cases of inflammation of the oral tissues occur where vulcanite is used as a basis than with gold or other metals, and so prevalent is this inflamation in the case of vulcanite that it has received the distinctive appellation of "rubber sore-mouth." Several reasons have been assigned for the effects produced by vulcanite. Nearly all this material is coloured with mercuric sulphide (vermilion), which ingredient has been accused of being the cause of trouble; but an exhaustive investigation did not substantiate this view, one particular point being that "rubber sore-mouth" often occurred where black rubber was used, which contains no vermilion. The porosity of vulcanite, especially when not sufficiently vulcanised, renders it liable to retain deleterious material if not kept scrupulously clean.

BURIAL REFORM AND ITS LEGAL REGULATIONS.

THROUGH the courtesy of Mr. Seymour Haden we have again an opportunity of revising his published opinions on the subject of reform in burial as a substitute for cremation. At the meeting of the International Congress of Hygiene and Demography last October Mr. Haden fully explained the advantages of the earth-to-earth system which is associated with his name, and in a subsequent letter to *The Times* he ably defended the propositions laid down in that paper. Notwithstanding that we have already on several occasions discussed this question, the practical importance of certain points which are noted in the articles before us must be our justification for again referring to them. Much has been said by cremationists respecting the contamination of water-supply by filtration of putrefactive matters from adjacent burial grounds, and the subject is unquestionably one deserving the cautious consideration of sanitary authorities. We are constrained, nevertheless, to the belief that under all ordinary conditions the oxidising processes occurring within the soil are sufficient for the wholesome transformation of such noxious substances into relatively harmless chemical equivalents. The now familiar instance of the Bishopsgate pump may be quoted in illustration. In dealing with morbid infection the case is somewhat different. Here again we cannot doubt that Nature is equal to the work of purification if due freedom, time, and earth space be allowed her processes. As regards time, difficulty may sometimes arise, and the observations of Pasteur and others tend to show that the germs of disease may linger long in the soil in which infected bodies have been buried. Such a contingency is of course abnormal, and it is one which could be simply and effectually met by the use of antiseptic precautions. As regards the medico-legal objection to cremation, we have little to add to former observations. Even the very careful system of certification adopted by its advocates is of course not perfect, and, though we would not go so far on this or any other known ground as to advise, with Mr. Haden, the prohibition of the practice, we confess that, in our view, no other method can ever so fully satisfy the possible needs of a criminal investigation as that which allows the exhumation of the body. Let us, in closing, briefly impress four points which comprise the gist of the rules relating to burial reform. These are: (1) That accurate certification be enforced; (2) that burial take place with the least possible delay after death has occurred; (3) that the needful arrangements be of the simplest kind, and such as to ensure virtually direct contact between the soil and the body; and (4) that legislative action be taken to secure these purposes.

A NEW BACILLARY DISEASE.

MM. CAZAL and VAILLARD, in the June number of the "Annales de l'Institut Pasteur" (Sur une Maladie Parasitaire de l'Homme), describe a remarkable condition in a patient who came under their observation. M. P——, a strong, muscular man, aged thirty-three, was admitted suffering from dysentery, dilatation of the stomach, restlessness, with a full pulse, no headache, nothing the matter with the lungs or heart, dry mouth, great thirst followed by extreme diarrhœa, and painful micturition. Eventually the patient died with symptoms very like those met with in the algid period of cholera or in cases of acute poisoning. On the whole of the peritoneal surface, in the pancreas, and in the liver were small rounded, discrete nodules, from the size of a millet seed to that of a pea; these contained a caseous substance, white, yellowish, and fatty, very like that found in dermoid cysts. There was some evidence of peritonitis; the mesenteric glands were slightly enlarged and congested. The nodules were most numerous in the pancreas, which appeared to have been the primary seat of the affection. In the fatty material were small, short bacilli well stained by Loeffler's blue. They were a little longer than broad, had rounded ends, not well stained by Gram's method. In the necrotic areas the masses of bacilli could be distinctly seen; they were also found in the more normal tissue, but they were not to be found in the healthy parts. In cultures, in which it was an easy matter to obtain pure growths, the organism was found as a short, motile rod, which might be isolated, arranged in pairs, or grouped in chains of ten or fifteen, or even more. These chains moved slowly, with a wavy-like motion. Unstained, they had the appearance of a figure of eight, or were dumb-bell-shaped, and were surrounded by a delicate, clear zone, which appeared to be a kind of envelope, though it was impossible to demonstrate the existence of a capsule by staining methods. The organism grows either aerobically or anaerobically. It causes cloudiness in broth after twenty-four hours, forming at the bottom of the flask a thick, pale, flocculent deposit.

The supernatant fluid is slightly milky, and gives an alkaline reaction. It grows more readily on the surface of gelatine, and causes slow liquefaction in forty-eight hours; at the bottom of the funnel there is a white, flocculent deposit. Grown on the surface of agar there forms in twenty-four hours, at 37° C., a moist, opalescent, translucent growth which extends rapidly until it covers the whole surface with a delicate uniform layer which gradually becomes thickened, though it still retains a certain amount of transparency. On potato the culture is abundant and spreads rapidly over the surface as a thick, moist, and slightly viscid film, first of a clear yellow colour and then of a yellowish brown. The cultures have a somewhat ammoniacal odour, almost like putrefying urine; they remain active for several months when exposed to the air, but when protected from air and light they remain active for more than three years. This microbe does not appear to form spores; it is destroyed in fifteen minutes at a temperature of 60° C. in a moist medium, but after drying it resists the temperature of 100° C. for about five minutes.

A CASE OF COLOBOMA OF THE OPTIC NERVE WITH SIMULTANEOUS MELANOMA OF THE CILIARY PROCESS.

DR. TALKO publishes in the *Przeglad Lekarski* the case of a boy of five years old who, from his birth, had been suffering from considerable impairment of sight. He discovered in both eyes a coloboma without a vestige of the hyaloid, and a melanoma of the ciliary process as well, the first case of the kind he had seen in his ophthalmic practice of thirty years. No such case has, as far as he knows, ever been mentioned in medical literature. Dr. Talko is not certain if the embryonic deformity of the ciliary processes is merely a complication of the coloboma, or whether it may be found independently of other deformities of the eyeball. The case, as the first of its kind, certainly deserves to be recorded.

FOOD SURVEILLANCE IN ITALY.

AMID so much (writes a holiday contributor) that calls for redress in the sanitary state of Italy, it is gratifying to record the energy and success with which her food and drink-supply is safeguarded. Shortly after the Public Health Act came into force one could hardly open a newspaper without alighting on paragraphs announcing the seizure of adulterated breadstuffs, or tainted meats, or "doctored" wines, or bogus mineral waters. Some of the great industries, like the sausage manufacture at Bologna, were severely compromised by the exposure of the semi-putrid horseflesh used in it; the cheese producers of Lombardy were also shown to deal largely in counterfeits; and the confectioners, with their brightly coloured dainties, and the "liquoristi" (or fancy-drink vendors), with their seductive beverages, were often convicted of employing deleterious and even dangerous substances to enhance the attractiveness of their wares. The penalties inflicted on these offenders, however, were so exemplary that few now venture to enrich themselves at the expense of the public and in contravention of the law; and the notoriety given to them in the press brought such custom to the "fair and square" dealers as to make many new, if tardy, converts to the principle that honesty is the best policy. Such cases, indeed, as the following become rarer and rarer, while the occasional publicity given to them serves to keep up the deterrent force of the act. A fancy baker in Turin was convicted of using a noxious dye to give an attractive colour to the "tortellini" (pastry with sweetstuff inside), for which Turin is famous. In spite of his plea that he did not know the deleterious nature of the colouring matter in question, the baker was sentenced to five days' imprisonment and twenty lire (16*s.*) fine. Against this sentence he appealed; but the Court not only sustained the judgment already given, but, finding that the adulteration had been practised in full knowledge of its hurtfulness to the consumer, and with the clear object of enhancing the selling price of the article, condemned the appellant as an "adulteratore doloso" (fraudulent adulterator), and gave him five months' imprisonment, with a fine of seventy-three lire (£2 18*s.* 4*d*). Italy does well to protect the consumer by such stringent regulations, and if she continues to practise the same surveillance over other matters equally affecting the health of the community she will have no reason to complain of the abstention of foreign visitors from her "sun traps" or winter cities.

A GASTROLITH IN MAN.

DR. KOOYKER has reported in the *Zeitschrift für Klinische Medicin* another case of gastric calculus—a condition which, though common enough in animals, is so rare in man that so far only seven cases have been reported. Dr. Kooyker's case was that of a man fifty-two years old, in whose lifetime it had been impossible to make a positive diagnosis, though some neoplasm of the stomach was suspected. The patient died from exhaustion. At the post-mortem examination a concretion was found in the stomach, almost entirely filling its cavity, which weighed 885 grammes and was eighteen centimetres in length. The microscopic examination resulted in finding starch, vegetable cells, chlorophyll, and vascular tufts, while hair and other animal elements were entirely absent.

"THE LANCET" RELIEF FUND.

UPON another page will be found the third annual report of the Almoners of this Fund, from which it will be seen that relief has been afforded in twenty-two cases, eight being cases in which money was advanced by way of loan and fourteen cases in which gifts of money were made. In number the total is precisely equal to that of the preceding year, the distribution of the benefits having also been an almost exact reproduction of that which was reported in 1891, when the loans were seven and the gifts fifteen in number. In amount the grants have this year been slightly larger than last year, the loans having aggregated to the same total sum—£117—and the gifts to £11 more than in 1890. The correspondence, of which some extracts are given in the report, shows that the facility with which in a proper case a grant can be made from this fund renders it in a case of emergency, such as it is intended to meet, a most valuable resource to the victims of sudden and unforeseen misfortune. Indeed, in many of the cases which come under the notice of the Almoners it is not merely true that *bis dat qui cito dat*—this aphorism does much less than justice to the facts, for in such circumstances as we have now in view to delay is to withhold, and he only gives at all who gives at once. It is a great satisfaction to the donors and Almoners of the Fund to know that so far it has proved fully equal to the particular class of necessities which it is intended to meet, and no single suitable case has been refused relief for want of funds. The balance in hand has steadily grown from year to year; and from £125 19*s.* 6*d.*, at which it stood in the beginning of last year, it had accumulated by the 31st December last to £170 14*s.* Although, therefore, it has been necessary to refuse some applications, every such refusal has been grounded on the demerits of the application, and no case coming within the rule has yet been brought to the notice of the Almoners without obtaining relief. We

have, therefore, no difficulty in calling the attention of our readers to this charity. The Almoners can, of course, only deal with cases that are actually brought to their notice. Their satisfaction in having been able, so far, to deal in a suitable manner with every such case is founded upon a hope that the general diffusion of information concerning the existence of this Fund leads to their receiving in every, or almost every, fitting case an application for relief. A form to be used in making applications for grants will appear in next week's issue of THE LANCET. We would call attention to the fact that Mr. Edward Davies has been appointed Secretary to the Fund, and that in future, as will be seen on reference to the form of application, all communications should be addressed to him at THE LANCET Offices, 423, Strand, London, W.C.

SENSORY AND VASO-MOTOR DISTURBANCE IN FACIAL PARALYSIS.

DR. FRANKL BOCHWART, in an investigation into the conditions present in twenty cases of facial paralysis, found that in three there were disturbances of sensation and of the vaso-motor functions, in five of sensory functions only, and in two of vaso-motor only. The sensibility was only affected to a very slight degree, and sometimes the mucous membrane on the tongue and inside the cheek was affected, and sometimes it was not. Occasionally also taste was affected. These sensory phenomena disappeared much earlier than the paralysis, but in one case in which the paralysis persisted there was diminished sensibility even after several years. The conclusion sought to be drawn from these facts is that the facial nerve in man contains some sensory and vaso-motor fibres; but of course it would first have to be shown that the fibres of the fifth nerve had not also suffered when the facial nerve became affected.

DIPHTHERIAL INFECTION OF TRACHEOTOMY WOUNDS.

DR. SPRONK of Utrecht[1] has discovered in the case of three children who had been tracheotomised for diphtheria a condition which has not hitherto been described, but which he thinks is far from rare. This consists in an inflammatory œdema of the subcutaneous and fatty tissue around the tracheotomy incision, caused by the invasion of diphtheria-bacilli. He points out that in ordinary diphtheria the bacilli are confined to the epithelial surface and the false membrane, and never penetrate into even the uppermost layers of connective tissue so long as the mucous membrane is free from necrosis. Nor are the bacilli ever found in the internal organs and blood of infected individuals. Nevertheless it has been shown experimentally that these microbes can multiply in the subcutaneous tissues, especially of some animals, guinea-pigs for example. The cases he examined had died a few days after tracheotomy, and although the wound itself was free from membrane, and looked healthy, yet there was a more or less widespread diffuse œdema, without any change in the superjacent skin. This œdema was obviously inflammatory, but there was no necrosis. In two cases it occurred not only in the vicinity of the wound, round the trachea and in the intermuscular tissue, but extended for some distance over the chest and upwards to the supra-clavicular regions. He found by tube-cultures that the serum taken from different parts of the œdematous area contained abundant bacilli, which were almost as numerous at a distance from the wound as near to it. The possibility that they may have multiplied after death was slight, seeing that these organisms require a temperature of at least 20° C. to grow. Other bacterial colonies were produced from the serum, but in one case this yielded almost a pure culture of Klebs' bacilli, and the capability of these organisms to cause this type of inflammation was proved experimentally. Dr. Spronk lays especial stress on the fact that, although of course the infection takes place through the tracheotomy wound, yet its margins appeared natural. This he ascribes to the use of iodoform and the short time that elapsed between the operation and death. The importance of the discovery lies in the additional risk of the rapid absorption of the toxine produced by the bacilli when these are lodged in connective tissue.

[1] Centralb. f. Allg. Path. u. Path. Anat., 1892, No.

IMPORTED INFECTIOUS DISEASES AND THE LIVERPOOL PORT.

SOME members of the Sanitary Committee of the Liverpool Corporation are desirous of imposing special restrictions on the landing and removal of cases of infectious diseases reaching their port. The desire is, in one sense, a laudable one, for it is very important to control imported infection. But, on the other hand, such a city as Liverpool should, above all others, remember that any unusual restrictions imposed on shipping and persons reaching our ports, in respect of our current contagious diseases, is a thing that the sanitary authorities of this country have decided to be unnecessary, and one that we generally cry out against when imposed on us in foreign ports. With yellow fever we are still tied to a quarantine system, without having the means of effectually carrying it out; with cholera we have to do with special regulations under the Cholera Order; but when we come to current infectious diseases we have nothing but the ordinary sanitary law and its provisions. Dr. Stopford Taylor has rightly advised that no special danger attaches to the removal of such cases by ambulance from ships in dock to the ordinary infectious hospitals, and his view must be regarded as correct. Such diseases are not, under proper restrictions, a danger by reason of ambulance traffic, and if the proper restrictions can anywhere be applied they ought to be possible with the aid and control of dock and port officials.

INFLUENZA AT MILAN.

WE make no apology for returning to the outbreak of influenza in the Lombard capital—that great entrepôt of the travelling world between West and East. The malady has outgrown the dimensions of an epidemic; it may rather be described as a plague. The public offices, the factories, the stores, the studios—all have the majority of their hands on the sick list and the hospitals can hardly admit another patient. The schools, on reassembling, will hardly muster a fourth of their number, though it is the infant rather than the boy, as it is the old man rather than the adult, that the malady visits most severely. The mortality, not great when we wrote last week, is now considerable, the deaths on Christmas Day amounting to sixty-five. With all this, it is not the influenza of two years ago. It wants the neurosal complications characteristic of its predecessor. Its attack is directed mostly to the lungs, setting up, or more often aggravating, bronchitis and pneumonia. Weak hearts, too, suffer severely under it. Coupled with the pulmonary and cardiac symptoms there is not unfrequently a kind of infective gastritis (*una specie di gastrite infettiva*, as the local physicians call it), characterised by total loss of appetite, while palate and tongue are furred with a paste like that of powdered marble (*poltiglia*), and there are pains at the stomach as in gastralgia proper. Errors of diet in quality or amount—anything that causes indigestion in short—seem to determine the virulence of the disease towards the stomach. In some cases, though by no means in the majority, rapid loss of strength ensues on the fever, though the

temperature is rarely above 101° or 102° F. In treatment the best—or rather, the only good—results have been obtained from quinine in varying proportions, or in combination with strychnine. Another feature of the visitation is the extreme liability to relapse, a first attack giving no immunity from subsequent ones, but seemingly inviting them; and these are less tractable than the primary one. An intelligible explanation of the violence of the disease in Italy is given by one of her most experienced practitioners, and that is the defective underclothing of the people, rich and poor alike. This, with the very insufficient warming apparatus in most Italian houses, and the tendency to make up for it—in the lower quarters particularly—by *huddling*, accounts (in his opinion) for the spread of a disease which ought, on many grounds, to find a less favourable nidus in Italy than in more northerly countries.

OPERATION FOR INTRA-CRANIAL HÆMORRHAGE.

DR. STIMSON showed, at a recent meeting of the New York Surgical Society, a patient, forty years of age, who some weeks before had been, in the course of a quarrel, struck on the head with a club. When first seen he was found to have a marked irregularity at the junction of the parietal bone with the squamous part of the temporal on the left side. Weakness of the right leg with complete paralysis of the right arm developed—it is not stated how long after the accident,—and his vocabulary was reduced to "Yes" and "No," although he could make voluble use of expletives. A diagnosis was made of intracranial hæmorrhage following injury, and five or six days after the injury was inflicted he was operated on. There was found to be a fracture of the temporal bone above the ear, but no depression. A fissure ran backwards over the parietal border. No blood was found between the bone and the dura, but the latter was dark in colour and no pulsation was observed in it. On opening it a large clot was found in the subarachnoid space extending back a considerable way. An ounce and a half in all were removed and the flap sutured. There was no immediate improvement in the patient's condition, but the paralysis gradually passed away and the ability to talk returned, although there was still evident impairment of this faculty. The case is a very important one, and its progress is very suggestive. Apparently operation could not be undertaken at once, as the question of possible homicide was pending, but there seems little reason to doubt that early operation in such a case would be followed by rapid recovery. Even after five or six days the amount of restoration obtained by the operation must be gratifying both to the patient and the surgeon, and it will no doubt become greater as time goes on. One curious thing about the case is that no mention is made of fits of any kind, which we should have expected as a result of a subdural hæmorrhage such as was present.

THE PREVENTION OF OVERLAYING.

IN the course of an inquiry held at the Marylebone Coroner's Court last week, Dr. Danford Thomas again drew attention to the relatively large number of infant deaths attributable to overlaying. The proportion of such deaths throughout London during the year is, he reminds us, between 600 and 700, and of this total somewhat over 200 are furnished by the central district alone. Dr. Thomas, in the course of his observations, offered a simple and rational explanation of the manner in which the fatal result is commonly brought about. It is due, in his opinion, either to the child slipping under the bedclothes when the mother's arm on which it lies becomes relaxed in sleep, or to its being drawn too near and pressed against the breasts. Either explanation is quite feasible, the former as accounting for mere accidental self-suffocation, such as also occurs when an infant is put to bed closely wrapped in a shawl; the latter as explaining the purely reflex act by which a sleeping parent may turn upon and smother her child. Clearly no person can or ought to trust herself in the circumstances with so frail a life. Cots are not so expensive but that the poorest mother, if thrifty, can usually provide one. If otherwise, even an improvised chair-couch is better for the infant than her own bed. It has been suggested that any case of fatal neglect in this particular should be held as a punishable misdemeanour. There is much to be said for this proposition. Our only objection to it is based upon a reluctance to enforce the penalty of imprisonment with its contaminating influences, and upon a conviction of the greater power of education than of legal rigour as a means of prevention. It is to be hoped and expected that the repeated warnings issued by Dr. Thomas and others in connexion with the subject will be duly regarded, and thus fulfil their intended purpose of instructing public opinion on this important subject.

CONVULSIONS TREATED BY COMPRESSION OF THE CAROTID.

DR. LEOPOLD ROHEIM of Budapest publishes in the *Gyógyászat* a case of eclampsia which he had, after the failure of all ordinary remedies, successfully treated by compression of the carotid. The case, which is quoted by the *Pester Medicinisch-Chirurgische Presse*, was that of a robust man of fifty-six, who had been suffering for years from cancer of the bladder, with occasional hæmaturia. The man had been attacked by a most violent eclamptic paroxysm, which was mainly confined to the left side. Dr. Roheim prescribed in vain musk, valerianate of zinc, bromide of potassium, assafœtida, hypodermic injections of morphia, enemata of hydrate of chloral, and frictions with mustard, and at last employed compression of the carotid. After constant compression for some time of the right carotid the convulsions were suddenly arrested, the patient recovered normal respiration, and very soon felt quite well. Two or three slighter attacks followed, which were soon arrested by properly instructed attendants. The effect of the compression was so remarkable that Dr. Roheim earnestly recommends this treatment. He compressed the carotid with the index and second finger between the larynx and sterno cleido-mastoid muscle backwards towards the spine, just as Trousseau and Blaud had recommended. He was equally successful in the case of a girl nine years old. He considers the *rationale* of the treatment to be that by compressing the carotid and at the same time necessarily the sympathetic nerve fibres, which closely follow the course of the artery, the excitability of the brain is allayed.

CARCINOMA OF THE LARYNX.

DR. LICHTWITZ of Bordeaux records a case of carcinoma of the left vocal cord,[1] which is of especial interest as bearing on the case of the late Emperor Frederick. The patient, fifty-three years of age, consulted Dr. Lichtwitz in November, 1889, for loss of voice, which had been almost absolute since the previous August, and from which he had suffered at times during the past two or three years. His health had been previously good, and there was no suspicion of syphilis, whilst the aphonia was the only symptom present. Laryngoscopical examination showed a smooth, fusiform, yellowish-grey swelling occupying the anterior two-thirds of the left vocal cord, which was congested posteriorly. The movements of the cord were impaired. A portion of the growth, which was suspected to be of malignant nature,

[1] Ext. des Annales des Maladies du l'Oreille et du Larynx.

was removed, and pronounced by M. Ferre to be so. But as it was thought desirable to get a further opinion, another portion was excised, and the sections sent to Professor Waldeyer of Berlin. He reported that they contained several horny bodies and papillary excrescences, but reserved an opinion as to their cancerous nature, until it had been determined whether the growth was circumscribed or diffuse. He said that the preparations were very similar to those examined by Virchow in the Emperor's case, and remarked that in that case it was the subsequent examination of the sputa and the clinical course which convinced Drs. Gerhardt and Bergmann of its malignant nature. In the present case, antisyphilitic treatment proving of no avail, further portions were examined and extirpation was decided on. Waldeyer reported on these later specimens that the growth was obviously papillary, and that if not already carcinomatous it would probably become so. M. Demons undertook the operation, and removed the growth by splitting the larynx, a preliminary tracheotomy having been performed some days previously. The operation took place on Feb. 22nd, and proved to be very difficult and tedious, since, in spite of the tampon, much material was drawn into the bronchi. The growth was very thoroughly removed and the exposed parts canterised, but the patient succumbed to broncho-pneumonia five days later. The carcinomatous nature of the affection was determined without question, and it was found that the cartilage was becoming infiltrated. Professor Waldeyer reported that there was great proliferation of the epithelium and an unusual degree of laminated tissue. He therefore regarded the growth as an example of scirrhus, whereas that of the Emperor Frederick was medullary. Dr. Lichtwitz, in his comments on the case, remarks on the paucity of symptoms, and cites with approval the conclusions of Dr. Semon, not to wait for absolute histological proof from extirpated fragments before excising, if the clinical course of the growth is that of malignant disease.

THE ASYLUMS BOARD AND DR. COLLIE.

A RESOLUTION has been passed by the General Purposes Committee—which is a committee of the whole Board—recommending a pension of $\frac{2}{3}$ths of £600 to Dr. Collie, who has resigned his position as medical superintendent of that hospital. The matter will be finally settled by the Board on Jan. 9th, 1892. We trust that the result of the decision will be the award of a liberal pension to Dr. Collie—one adequate to the eminent services which he has rendered in connexion with the duties of the office which he has just vacated, as well as in view of his valuable contributions to the literature of infectious diseases.

CASES IN VESICAL AND URETHRAL SURGERY IN NEW YORK.

THE *New York Medical Journal* contains an interesting paper, read by Dr. Fred. S. Dennis, on some cases of vesical surgery. One of these was that of a man who, after slipping from a scaffold, fell astride a staging horse and ruptured his urethra, giving rise to extravasation of urine and deep perineal abscess. On admission to the hospital, in a very weak and anæmic state, there was a large opening in the perineum, in which the two ends of the ruptured urethra could be seen two inches apart. There was also acute cystitis. During the few days following admission there were several severe hæmorrhages from the wound, rendering the patient pulseless, and requiring hypodermic injections of brandy and digitalis. On Nov. 5th, after eleven such hæmorrhages, his condition was so alarming as to induce Dr. Dennis to tie the internal pubic artery. This effectually stopped the hæmorrhages. The wound in the perineum soon began to granulate. A catheter passed through the penile portion and then into the proximal end of the urethra was left in the bladder. It was ere long covered with granulations, the two inches of urethra were made up, and the patient passed most of his urine through the penis. In less than six months the urethra was quite healed. Case 4, reported by Dr. Dennis, is that of a supra-pubic lithotomy by which a large stone was removed without the slightest difficulty, weighing 1360 grammes (about forty-four ounces), measuring seven inches in circumference and two inches and a half in diameter. The patient was twenty-four years old, and had had hæmorrhage and other symptoms of stone for nineteen years. The urine contained a great deal of pus, the patient was exceedingly pale, and he weighed less than 100 pounds. He recovered perfectly and gained thirty-five pounds in weight. Case 9 was one of hæmorrhagic cystitis occurring as a complication of typhoid fever, the formation of a calculus with a blood-clot as a nucleus, and the extrusion of a complete cast of the interior of the bladder.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. H. Thierfelder of Strasburg has been recognised as *privat docent* in Medical Chemistry.

Harvard.—Dr. H. C. Ernst has been appointed Assistant Professor of Bacteriology.

Kazan.—Dr. Malinovski of Kieff has been appointed to the chair of Operative Surgery.

Prague (Bohemian University).—Dr. Mischel has been promoted to an Extraordinary Professorship.

St. Petersburg (Military Medical Academy).—Drs. Batuyeff and Fabitski have been recognised as *privat docenten* in Anatomy and Clinical Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Otto von Gärtner, formerly Body Physician to the King of Wurtemburg, on Dec. 9th, at Stuttgart, in his seventieth year. He was the first surgical director of the Catherine Hospital, and was not only a good ophthalmologist, but enjoyed a large medical practice as well.—Dr. Jean Servais Stas, Professor of Chemistry in the Brussels Military Academy, at the age of seventy-eight. He was a medical man, and contributed considerably to the application of chemistry to forensic medicine and to the investigation of animal substances, such as the amniotic fluid. Indeed, his name is known to every student of elementary organic chemistry.—Dr. G. Kordi, ordinator of the Gynæcological Clinic of the St. Petersburg Medical Academy.—Constantine Leonteiff, who, though a medical man, is known chiefly by his writings on ethnography and non-medical subjects. He was at one period of his life in the Russian diplomatic service, being stationed in Turkey and Greece. He was then appointed censor of the press at Moscow, and some years ago entered a Russian monastery as a monk.

IT may be well to remind our readers that the five years' curriculum will apply to all candidates for the licence of the Royal College of Physicians and for the diploma of member of the Royal College of Surgeons of England who register as medical students after Jan. 1st, 1892. The revised regulations are not yet ready for issue, but it is probable that they will be published before the end of January.

PROFESSOR CELLI of Rome, whose "Reminiscences of an Italian at the International Congress of Hygiene" were lately given in THE LANCET, has just delivered (Dec. 28th) an address in that city on "Woman's Place in Social Hygiene." Her Majesty the Queen of Italy presided.

IT was reported in several of the German medical journals last week that Professor Ph. Schech of Munich was dead. This, fortunately, is not the case, though he was seized, while performing a very long and troublesome laryngeal operation, with sudden spasm of the glottis, which was followed by a tetanic condition, from which, however, he is recovering.

AT the meeting of the Election Committee of the Middlesex Hospital on Wednesday last Dr. W. Essex Wynter was elected Assistant Physician, in succession to Dr. Kingston Fowler, who has been appointed fourth Physician. Dr. Wynter has for the past three years been medical registrar to the hospital, and is an *alumnus* of its school.

THE death is announced of Dr. Richet, Professor at the Faculty of Medicine and surgeon at the Hôtel Dieu, at the age of seventy-one.

MR. ANTHONY A. BOWLBY, F.R.C.S., has been appointed Assistant Surgeon to St. Bartholomew's Hospital.

SIR WILLIAM TURNER has been appointed a Deputy-Lieutenant of Edinburgh.

Pharmacology and Therapeutics.

STRONTIUM IN PARENCHYMATOUS NEPHRITIS.

M. Constantine Paul, writing in *Les Nouveaux Remèdes* on the treatment of Bright's disease by strontium, remarks that Carlsbad water contains a small quantity of the carbonate of strontium, this being practically the only difference, chemically speaking, between the true Carlsbad water and what has been called French Carlsbad—that is to say, the water of Miers in the department of Lot. Professor Sée has made some observations as to the value of strontium in place of sodium; but M. Paul, arguing from its place in the electro-negative series between lithium and calcium, thought it might more probably be found suitable as a substitute for lithium. The salt he generally employed was the lactate, and of this he has during the last few months prescribed more than a couple of pounds in addition to smaller quantities of the bromide and nitrate. According to some physiological researches recently published by M. Laborde, the salts of strontium are innocuous, thus contrasting with those of barium, which are highly poisonous, and with those of potassium, which are not well borne in large quantity. Strontium salts are not diuretic, and they have the property of diminishing the albumen in epithelial and parenchymatous nephritis, though they do not altogether stop its formation. If the drug is discontinued prematurely the albumen increases again. A large number of cases having been treated with strontium, M. Paul is now in a position to give the following general results. It is useful in parenchymatous nephritis, whether of rheumatic, scrofulous, or gouty origin; also in the albuminuria of pregnant and parturient women. He is not able to say as yet whether it is suitable in scarlatinal albuminuria or in the albuminuria of other infectious diseases, or in that depending on syphilis, or in cardiac cases. It has, however, shown itself valueless in interstitial nephritis, and also in the albuminuria of phthisis. As a rule, the diminution of the albumen is followed by a marked amelioration in other symptoms, and the patient improves considerably. In order that the treatment may succeed it is important that it should be commenced before the period of urinary insufficiency and uræmia has arrived. Pyrexia, however, even when of a high degree, does not prevent the lactate of strontium from exerting its beneficial action in parenchymatous nephritis. It has been suggested that bromide of strontium might be found useful in epilepsy; but of this M. Paul has only had the experience of a single case, where, indeed, it appeared to succeed in a remarkable manner after bromide of potassium had been given in large doses without effect. The daily quantity of bromide of strontium ordered in this case was ninety grains, and this was continued for two months. In the nephritic cases the dose of the lactate per diem was from 120 to 150 grains, and in no case was it badly borne.

CANTHARIDATES IN TUBERCULOSIS.

In a recent number of *Merck's Bulletin* numerous investigations of the efficacy of cantharidates are reported, the cases varying from lupus, tuberculous ulcers, and granular lids to laryngeal and pulmonary tuberculosis. Opinions differ with regard to the pain produced at the point of injection; according to one observer all the patients complained of intense pain. With very few exceptions there was no rise of temperature or other sign of general reaction. None of the patients ever complained of any urinary difficulty or symptoms referable to irritation of the urinary organs. The beneficial results in cases of lupus are said to have been very striking; the cases of granular lids were markedly improved; most of the cases of laryngeal phthisis underwent considerable improvement, but in two cases in which fever was present before the treatment was begun the injections seemed to have no particular effect on the fever or on pulmonary symptoms. On the other hand, it is stated that it has no effect on the tuberculous processes in the lungs, that it neither sets up nor reduces fever, and that it has no effect on the number or shape of the bacilli. Professor L. Tümas concludes that on the whole the cantharidate treatment is decidedly beneficial in some cases, and hence deserves a further trial. Its chief advantages are that the medicament can be prepared by everybody, that it admits of precise dosage, that it does not give rise to any serious complications, and that it can be safely applied to out-patients, as it does not involve any change in the patient's usual mode of life.

CAMPHORIC ACID IN PHTHISIS AND IN CYSTITIS.

Camphoric acid has been employed in cystitis, and as an intestinal disinfectant, by Fürbringer; it has also been used with success in the treatment of the night sweats of phthisis. More recently Bohland has been employing this drug, of which he gives one gramme in a wafer at nine or ten o'clock at night. The dose may be increased to two grammes, or even to three grammes if necessary; for some patients who only begin to perspire towards the morning it may be well to administer the camphoric acid at two or three o'clock in the morning. The results he obtained were satisfactory in about 80 per cent. of the cases. Camphorate of soda appears to have an action somewhat inferior to that of camphoric acid. In two cases the acid, given in the dose of three grammes in three doses, arrested phthisical diarrhœa which had resisted other methods of treatment. In cystitis when the urine is ammoniacal and alkaline it can be speedily cleared and rendered acid by three grammes of camphoric acid in the day, given in three doses. The acid is eliminated with the urine from two to five hours after its administration. Urine thus impregnated with camphoric acid may be kept several days without undergoing putrefaction.

A NEW METHOD OF TREATING DIPHTHERIA.

Dr. Charles Smith of Casterton, Australia, has recently given his experience of a new method of treating diphtheria. It has the advantage of not necessitating the stoppage of other methods of treatment. Briefly stated, the treatment consists in the continuous inhalation of a vapour composed of a mixture of carbolic acid, eucalyptus oil and turpentine, together with the administration, in ordinary doses, of tincture of digitalis, tincture of belladonna, and aromatic spirit of ammonia. The only novelty claimed by Dr. Smith is the continuous employment of the inhalation, together with the method of applying it. The ingredients are mixed in the following proportions:—Carbolic acid 1, eucalyptus oil 1, turpentine 8. Sometimes, however, he has used them in the strengths of 1–1–4. In the mixture two cloths, about a foot square, are soaked; one is placed close to the face, the other on the pillow near the head; one or two others are hung about round the cot. It is important that none of the cloths should be allowed to touch the face. Brief notes of seventeen cases are given.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—Notice has been issued that a meeting of the members will be held at 3, Bolt-court, Fleet-street, on Tuesday Jan. 12th, at 4 P.M.

REPORT OF

The Lancet Sanitary Commission

ON THE

VENTILATION OF THEATRES AND PLACES OF PUBLIC ASSEMBLY.

PART II.—THE PARIS SORBONNE.

WE will now describe the ventilation of the great amphitheatre of the Paris Sorbonne, which contains 3000 seats, and is the most recent application of the principles we have attempted to explain. We have already remarked that the Paris Sorbonne was the latest application of the principles of ventilation so successfully employed at the Vienna Opera House. Of course we allude to the new Sorbonne, the magnificent edifice that abuts on the Rue des Écoles, which was inaugurated in 1889, but which, nevertheless, has not yet come fully into use. Within this structure there is an immense amphitheatre, where all the great ceremonies connected with the Paris University take place. Here the problem of warming and ventilating is as difficult as in a theatre, for 3000 seats have to be provided; while that of the form of structure is even more difficult, for the seats should be all equally good. The building, however, differs from a theatre inasmuch as there is a platform instead of a stage. The form adopted is that of most Parliament houses—namely, the semicircle, with a platform instead of the tribune. The president's seat is of course in the centre of the platform, facing the half-circle. The pit or floor is about the size of the platform—namely, only half the width of the amphitheatre. On each side and all round rise tiers of seats, while on the floors above there are two galleries. Even the sectional drawing, which we give, will at least partially show that the seats are all equally good and command an equal view of the platform. It will be observed how under every seat there is an air inlet. In fact, the seats in the galleries, as in the body of the hall, are all suspended over air chambers, and these air chambers form the third of the series—namely, the mixing chambers similar to what we have seen at the Vienna theatre. Yet the ventilation only resembles that of the Vienna Opera House in general principle; there is a difference in detail. The air is propelled into the amphitheatre by the force of three fans that stand side by side in the inlet passages or air shafts. A portion of the air is conducted into a furnace, where it is warmed, the other portion travels upwards towards the mixing room. The two shafts, however, meet together just below the floor of the mixing room. Here a very simple apparatus enables the attendants to open more or less widely the door or valve of the cold air shafts. The wider it is opened the greater the current of cold air as compared with that of the warmed air, and thus by moving these valves the temperature of the mixing chamber is easily regulated.

The three fans propel each 20,000 cubic metres of air per hour. This is, therefore, a total of 60,000 cubic metres. But if they were made to revolve with exceptional velocity the supply of air could be raised to 72,000 cubic metres per hour. These fans are unusually large in diameter, more than six feet, and they only make about 150 revolutions in the minute. They were designed especially to produce a plentiful but slow current of air. When a shaft is very long and force is required to send the air forward a great distance, as in the ventilation of coal mines, then the Ser ventilator would, with its great centrifugal force, render better service. But at the Sorbonne the object was the reverse—namely, that of moving a large volume of air over a wide space at a slow rate. The power is provided by a gas motor engine of 15 horse-power. As the air enters the underground passages it can be moistened in summer by a spray of water. This spray is produced in the same manner as that which exists at the House of Commons, whence the idea was derived.

When tenders were invited for the ventilation of the Sorbonne, the condition stipulated was that each person should be supplied with 20 cubic metres of air per hour. A well-known firm of French sanitary engineers, Messrs. Geneste and Herscher, were successful in the competition that ensued, and we have seen that the screw fans which they provided, by propelling 60,000 cubic metres of air per hour, supply precisely the 20 cubic metres required for each of the 3000 persons who can be seated in the amphitheatre. But with mechanical force it is easy enough to give any amount of air; the difficulty is to ensure its even distribution, and this in so slow and gradual a manner as to be imperceptible. To moderate the current, the air inlets, which are cut out in the floor under every seat, are covered over with two perforated iron plates, placed about an inch one above the other. The perforations in the plates are very small namely, four millimetres in diameter. These iron perforated plates measure about 8 in. by 14 in., but the total useful surface for air inlet amounts throughout the whole amphitheatre to 80 metres square. The rapidity at which the air enters is equal to 25 centimetres per second. The outlets measure in all 45 metres square; they are situated in the roof of the hall and under the galleries. Here the air passes out at the rate of 50 centimetres per second. Gas-burners help to draw upwards the vitiated air till it reaches the final outlet shaft, which measures 14 metres square; and in this shaft the air travels at the rate of 1 metre 20 centimetres per second. It has not been found necessary to place an exhaust fan in this outlet shaft; the air, being warm and forced in from below, naturally goes upwards.

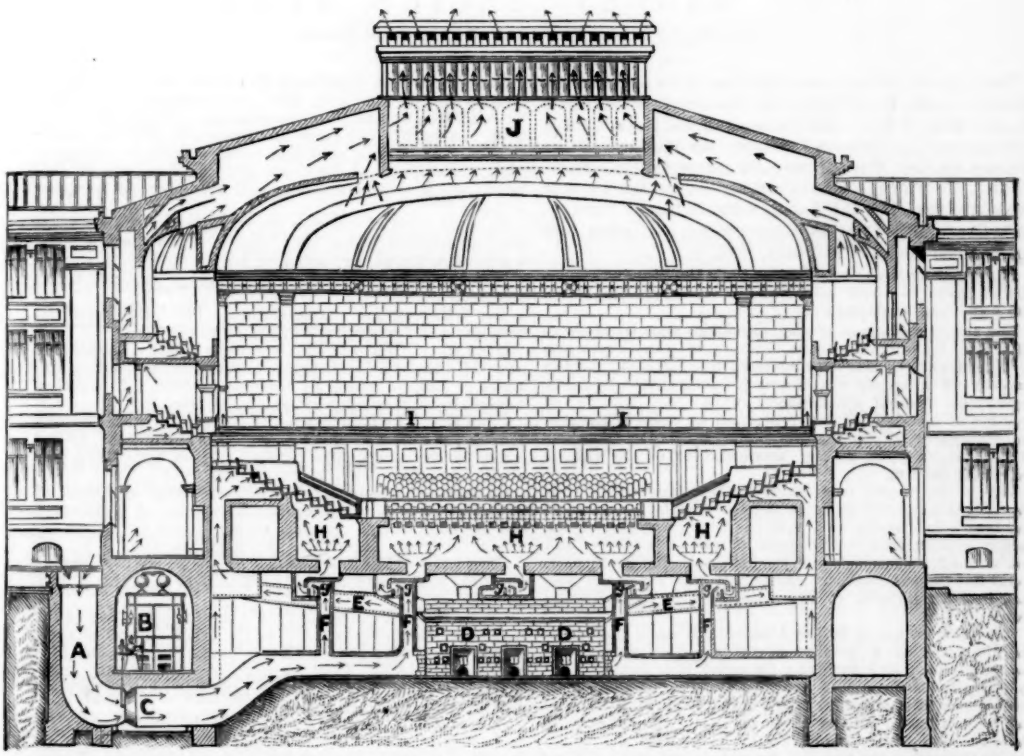
Thus we find realised at the Sorbonne what had already been done at the Vienna Opera House. In the screw fans and the 15 horse-power engine are the mechanical means of providing with mathematical exactitude the amount of air required. Then there is the large mixing chamber, where, by means of nicely adjusted valves, the attendants can regulate the inlet of hot air and of cold air so as to make an atmosphere which they generally warm to 65° F. The inlets are so numerous and large that the air can only travel through them slowly, and, being subdivided by the minute perforations in the iron plates placed over the inlets, occasions no draught. All this, we repeat, is a copy of what we have seen at Vienna; but Messrs. Geneste and Herscher were determined to go a step further, and attempt to realise for the Sorbonne M. Émile Trélat's highest conception of good ventilation.

M. Trélat's ideal of well-being is a fine autumnal day, when the air is cold and crisp, but the rays of the sun are still warm. The colder the air, the greater the internal oxidation in breathing, and therefore the greater the internal warmth. If while breathing cold air the body can be preserved from external cold by the radiation of heat from the sun or other sources, then the most healthy and the most enjoyable state of physical existence results. We know that the atmosphere takes up little or none of the heat that passes through it by radiation. To realise this ideal the walls surrounding the amphitheatre are hollowed, and inside there is a canalisation by which heat can be imparted to the substance of which they are built. Also the flat wall facing the amphitheatre, by reason of its size and the coldness of the stones with which it is built, would chill the air in the body of the hall and determine a down current. This would strike the heads of the professors sitting on the platform. To obviate such a danger, at a height of about ten feet above the platform, and for the whole length of the wall, there is an emission of especially heated air, which counteracts the down current and the chill created by this broad surface of cold wall. Thus the cold produced by the material of the building itself is neutralised. This is not all. Though, as already explained, there are ample means of providing warmed air throughout the whole of the amphitheatre, it can also be ventilated with cold external air in the midst of radiated heat. To secure this imitation of M. Trélat's ideal autumnal, cold, bright, sunny day, the air-mixing chambers of the amphitheatre are closed about an hour before the public are admitted. The batteries in the heating furnace are raised to about 300° to 400° C. The air passing over these very hot warming batteries is allowed to escape up all the hot air shafts built inside the walls of the amphitheatre. It enters the amphitheatre by the openings such as that situated ten feet above the platform, and travels upwards along the cold surface of the walls, which are soon warmed. As this is proceeding the air in the mixing chamber, by its proximity with the furnace that is in the chamber below, becomes slightly warmed. It therefore expands and travels

upwards through the multitudinous openings into the body of the hall. In a very short time the temperature of the whole amphitheatre is raised to about 160° F. The place is therefore absolutely untenantable. The walls, the furniture, everything in the amphitheatre is thoroughly heated, and soon absorbs and husbands a large stock of caloric. Then about a quarter of an hour before the public are admitted all the hot-air supply is cut off, and the warming of the amphitheatre entirely stopped. The air-propelling screw fans are now set in motion. They pump into the amphitheatre pure cold air from the street. The overheated air is soon driven out, and by the time the public enter they find in the amphitheatre exactly similar air to that they were breathing in the street. This air has not been warmed or mixed with warmed air in any way; it is a pure and, so to speak, an unadulterated out-of-door atmosphere. But through this cold air is radiated the heat given off by the hot walls and furniture of the amphitheatre. Also the cold incoming air as it strikes the hot walls is warmed. It therefore becomes lighter, expands, and travels upwards towards the outlets in the ceiling. If, on the contrary, as is usually the case, the walls were cold and the incoming air was warmed, then the air on striking the walls would be cooled, would condense, would become heavier, and therefore would fall as a cold draught on the heads of the people below. The walls of the amphitheatre retain their heat for a few hours; that is long enough for the ordinary meetings held in this magnificent assembly hall. Thus the Sorbonne amphitheatre can be warmed and ventilated as is the Vienna Opera House, with a carefully prepared mixture of hot and cold air; it may be ventilated with pure cold outside air, and warmed by radiation from its heated walls, or the two systems may be combined if desired.

There is something especially fitting in the fact that this, the great centre, where honours and rewards are distributed to those who have distinguished themselves in learning and science, should in itself be an example of what science can achieve for the comfort and health of the audiences privileged to assist at any of the meetings held in this amphitheatre. At the Sorbonne will be crowned the laureates of the Paris University, but crowns should also be reserved for those who have made its amphitheatre an example to the world of what can be done to secure the due observation of Nature's laws by continuing the provision of pure air, even when 3000 persons have to assemble under one roof and in one single hall.

THE NEW SORBONNE, PARIS.



A, Pure air inlet. B, Engine house. C, Inlet ventilating fan. D, Furnace for warming the air. E E, Hot air shaft. F F F F, Cold air shafts. g g g g, Valve regulating amount of cold air, which here joins the hot air shaft. H H H, Hot and cold air mixing chambers. I I, Hot air pipe to counteract cold down draught caused by the wall. J, Burners above glass reflecting roof, serving to light the amphitheatre and draw off the foul air.

NEW INFIRMARY BUILDINGS, ST. OLAVE'S UNION.—Recently the opening ceremony took place of the new pavilions at the infirmary, Lower-road, Rotherhithe. They have been erected by the guardians of the poor of the St. Olave's Union, and will provide room for 280 beds, raising the total accommodation to 650 beds. The outlay has amounted to about £36,000.

BROWN *v.* DUKES AND CARPENTER.

AT a special meeting of the members of the Croydon Medical Reading Society, held Dec. 22nd, at the house of Mr. Richardson, the following resolutions were passed unanimously:—1. That steps be taken to raise a fund towards defraying the expenses incurred by Drs. Duke and Carpenter in defending the action Brown *versus* Dukes and Another." (2) That Dr. Coles, George-street, Croydon, be requested to act as treasurer of the fund, and that Mr. Richardson, 87, London-road, West Croydon, act as secretary. (3) That the secretary be requested to send circulars to all the members of the South-Eastern Branches of the British Medical Association, and other medical men in the district. (4) That the preliminary expenses of soliciting subscriptions be borne by the funds of the Society. (5) That the Editors of THE LANCET and *British Medical Journal* be asked to kindly acknowledge the subscriptions in their columns. The following sums have been promised:—

Dr. Adams	.. ..	£2	2	0	Dr. Morton..	£2	2	0
Mr. Horsley	.. ..	2	2	0	Dr. Coles	2	2	0
Mr. Richardson..	..	2	2	0	Dr. Duncan..	2	2	0
Mr. Wray ..	.. ..	2	2	0	Dr. Philpot..	2	2	0
Dr. Barnes ..	.. ..	2	2	0	Dr. Rosser	2	2	0

*** It will be remembered that we have already opened a subscription list on behalf of the defendants in this action, and that a preliminary list of subscribers was published in our issue of Dec. 19th. We shall, however, be pleased to coöperate with the Croydon Society to hand over to Dr. Coles, the treasurer, the sum we have received, and to acknowledge further subscriptions.—ED. L.

THE LANCET RELIEF FUND.

THIRD ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians (Sir ANDREW CLARK, Bart., F.R.S.), the President of the Royal College of Surgeons (Mr. THOMAS BRYANT), the President of the General Medical Council (Sir RICHARD QUAIN, Bart., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Camb., F.R.C.P., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the third annual report, the Almoners think it well again to direct attention to the objects for which the Fund was established.

For the sustentation of the Fund the sum of at least £300 will be provided every January by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to registrable medical practitioners, or to the widows or orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress, the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registrable medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected exigency which is not likely to recur, have pressing need of immediate and temporary pecuniary relief," and who, it may once more be pointed out, are likely to be permanently benefited thereby.

The balance in hand at the end of 1890 amounted to the sum of £125 19*s.* 6*d.* On January 1st, 1891, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. During the course of the year repayments to the amount of £33 16*s.* 6*d.* have been made. The sum of £289 2*s.* has been granted in relief either by way of loan or of gift, leaving a balance of £170 14*s.*

There have been considered altogether during the twelve months ending Dec. 31st, 1891, twenty-seven applications for relief (the number the previous year having been forty-five). In twenty-two cases assistance was afforded, either as a loan or as a gift, according to the request of the applicant, the amounts of the grants ranging from two guineas (given on a special occasion and for a special purpose) to £25.

In some cases of extreme urgency, as was the case last year, an application has been considered by the Almoners, a grant sanctioned, and a cheque for the amount forwarded to the applicant on the same day that the application was received.

The following are extracts from a few letters received from some of the recipients of the Fund:—

CASE 92.—"Will you kindly express to the Almoners his heartfelt thanks for their great consideration in sending him a gift of £10, for which he is deeply grateful. It is such a comfort to us in our present painful position."

CASE 95.—"I am in receipt of your letter with enclosed cheque for £25, for which I am deeply grateful. It has come to me most opportunely. Again expressing my abiding gratitude."

CASE 99.—"I cannot find words sufficient on behalf of myself and family to express the deep sense of gratitude I feel for your liberal response to my appeal for aid in my present distress. Again sincerely thanking you."

CASE 100.—"I beg to thank you for so kindly lending me £25, which enables me to tide over a pressing difficulty."

CASE 112.—"Your prompt reply to my application to the Almoners was truly a relief to my mind. I was afraid I should lose a chance of earning a livelihood for want of a few pounds. ..... Pray express, on my behalf, more adequately than I can, my appreciation of the kindness shown to me by the Almoners."

CASE 113.—"I beg to sincerely thank the Almoners for their very kind response to my appeal, and to assure them that I shall ever feel grateful to them for the same. I have every reason to hope that the advance made will enable me to hold my ground. Assuring you how deeply I feel your kindness."

CASE 114.—"I am instructed by Dr. —— to express his sincere gratitude for the donation enclosed in your letter of ——. It reached him just in time, as he was totally destitute and actually starving."

CASE 98.—Extract from a letter received on final repayment of an advance: "I can only say that I am very much obliged indeed for the loan, which has been of the greatest use to me."

A resolution was passed at the meeting of the Almoners, expressing their deep regret at the loss the Fund had sustained by the death of Professor Marshall, who was one of the original Almoners of the Fund.

Mr. Edward Davies has been appointed Secretary to the Fund.

(Signed)

ANDREW CLARK, THOMAS WAKLEY,
THOMAS BRYANT, THOMAS WAKLEY, JUN.
RICHARD QUAIN,

Statement of Accounts for the Year ending Dec. 31st, 1891.

DR.

	£	s.	d.
To Balance at Bank Jan. 1st, 1891	125	19	6
,, Proprietors of THE LANCET	300	0	0
,, Repayment of Loans :—			
Case No. 25 ... ... £5 10 0			
,, 64 ... ... 10 0 0			
,, 98 ... ... 12 0 0			
,, ,, ... 0 1 6			
,, 105 ... ... 1 5 0			
,, 107 ... ... 5 0 0			
	33	16	6
	£459	16	0

CR.

	£	s.	d.	£	s.	d.
By Loans :—						
Case No. 97	10	0	0			
,, 98	12	0	0			
,, 100	25	0	0			
,, 105	20	0	0			
,, 107	25	0	0			
,, 112	5	0	0			
,, 113	10	0	0			
,, 115	10	0	0			
				117	0	0
By Gifts :—						
Case No. 90	5	0	0			
,, 92	10	0	0			
,, 94	5	0	0			
,, 95	25	0	0			
,, 99	15	0	0			
,, 101	10	0	0			
,, 104	15	0	0			
,, 108	10	0	0			
,, 109	25	0	0			
,, 110	2	2	0			
,, 113	15	0	0			
,, 114	10	0	0			
,, 115	15	0	0			
,, 116	10	0	0			
				172	2	0
By Balance at Bank Dec. 31st, 1891				170	14	0
				£459	16	0

I find by the Banker's Book that the actual balance on Jan. 1st, 1891, to the credit of the Fund was £125 19*s.* 6*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on the same day.

The balance at the Banker's at the present date is the sum of £170 14*s.* I have also checked the receipts for disbursements, and find the above account strictly accurate.

December 24th, 1891. HENRY A. PITMAN, Hon. Auditor.

THE MEDICAL SOCIETIES.

WE much regret that, owing to an unfortunate delay in the post last week, we were compelled to hold over our annual review of the work of the Medical Societies during the past year. In the accompanying short glimpse of the work that has been accomplished we have followed our usual custom, and have selected a few only of the many prominent communications for notice, it being quite impossible to deal with even a majority of them in at all an adequate manner. We may preface our remarks, however, with the assertion that the material produced before the Societies during the past twelve months has been equal in value to that of any previous year. All the old Societies continue to increase in their numbers and to flourish financially, while the last month of the year has given birth to another, which has been christened "The North London Medical and Chirurgical Society." Its chosen place of meeting is the Great Northern Central Hospital, and a considerable accession of members has already justified it in looking forward with confidence to a prosperous and useful career.

We will commence our retrospect with the *Medical Society of London*. The subject of the treatment of chronic disease of the uterine appendages was introduced by Dr. William Duncan in a paper giving notes of thirty consecutive cases treated by abdominal section, and Mr. Alban Doran at the same meeting gave a brief historical view of the whole subject. Dr. Douglas Powell inaugurated a discussion on the subject of angina pectoris, which he held was not such a simple malady as had been thought, and which he classified, according to the symptoms, into four subgroups. Mr. Edmund Owen referred to a case in which he had amputated both breasts simultaneously for cancer, and held that, contrary to the teaching of text-books, bilateral disease should not be considered a bar to operation. An interesting series of cases illustrative of hepatic surgery was communicated by Mr. Knowsley Thornton. Surgeon-Major Keegan of Indore brought forward the results of his experience as to litholapaxy in children, and he tabulated and commented upon the 125 operations which he had performed in males below fifteen years of age. Dr. B. W. Richardson pointed out the various methods of administration of peroxide of hydrogen. Dr. De Havilland Hall read a paper on chronic atrophic rhinitis, discussing fully its etiology and treatment. Mr. Buckston Browne emphasised the importance of the post-prostatic or trigonal pouch in the surgery of vesical calculus, illustrating his remarks by several cases. Dr. G. A. Heron gave his experience of the use of Koch's remedy in lupus vulgaris and in tuberculosis of the lung. Mr. Whitehead brought before the Society a list of 104 cases of entire excision of the tongue carried out by the method he had recommended. Mr. Mansell Moullin advocated the treatment of compound fractures into joints by corrosive sublimate baths. Professor Bahadhadji gave his experience of the treatment of dysentery by simple therapeutic measures. Mr. H. Allingham read a paper on fifty cases of left inguinal colotomy, and remarked on their points of special interest. Dr. Julius Althaus dealt with the pathology of influenza from its neurotic aspect, and Dr. G. H. Savage gave his views on the relationship of this disease to the neuroses. Dr. Burney Yeo enumerated what he considered to be the conditions of cure in consumption. Mr. Richard Davy gave his experience of amputation at the hip-joint, illustrated by ten cases. Dr. Thomas Savill furnished a detailed description of the epidemic skin disease at Paddington Infirmary, and at the last meeting Dr. Ord read a thoughtful paper on the occurrence of cardiac symptoms in conjunction with gastric ulcer.

At the *Royal Medical and Chirurgical Society* cases illustrative of the advance which has been made in dealing surgically with calculous affections of the kidneys were described by Mr. Lucas, Mr. Godlee, and Mr. Turner. Dr. Pye-Smith communicated a paper on the therapeutic value of venesection, in which this practice was held to be useful in meeting certain indications of pathological states, especially in cyanosis from obstruction, the intense pain of aneurysm, and in uræmic and prolonged epileptic convulsions. Sir George Humphry, dealing with the subject of macrodactyly and some other forms of congenital overgrowth in their relation to tumours, held that the process in both was analogous, both being instances of insubordination to the laws of development and growth. Mr. Barwell advocated a method of treatment which he called rachilysis for straightening spinal curves. The curious condition

known as idio-glossia was illustrated by papers introduced by Dr. Hale White, Mr. Golding-Bird, and Dr. Frederic Taylor. Mr. Lockwood dealt with the subject of the treatment of strangulated hernia when the intestine was gangrenous or ulcerated, and he concluded in favour of primary resection and suture. Mr. John H. Hutchinson discussed the possibility of the poison of measles acting as a cause of endocarditis, but he seemed to think that a rheumatic taint was at the bottom of the cases he quoted. A very suggestive paper from the pen of Mr. Arbuthnot Lane dealt with the subject of chronic traumatic arthritis, which he differentiated from rheumatoid and rheumatic arthritis respectively. Mr. Watson Cheyne gave the results of his investigations into the value of tuberculin in the treatment of surgical tubercular diseases. Mr. Bowlby read a paper on thirteen cases of Paget's disease of the nipple, and he concluded that there was no evidence to support the view that the growths were caused by psorosperms. Dr. Délepine and Mr. Dent gave the result of their researches as to the changes observed in healthy arteries and in tendon ligatures during the first four weeks after ligation. Dr. George Thin and Dr. Wethered communicated a paper on the symptoms and pathology of a case of acute inflammation of the mucous membrane of the ileum from climatic causes. Mr. Raymond Johnson and Dr. G. Murray used a case of limited lesion of certain spinal nerve roots by secondary carcinoma to demonstrate the source of the nerve supply of certain muscles. Dr. A. Haig held that uric acid was an important cause of high arterial tension. Cases illustrative of the infection of the human subject by actinomycosis were brought forward by Dr. W. H. Ransom, Dr. W. B. Ransom, and Mr. A. R. Anderson. Mr. Lawson Tait drew attention to the occurrence of pleural effusion in association with disease of the abdomen. Mr. D'Arcy Power produced an analysis of sixty-three cases of ununited fracture occurring in the long bones of children. He believed that these lesions were more frequent than they formerly were.

At the *Pathological Society* many subjects of great interest were discussed, and we are only able to select a very few of them for remark. Sir Hugh Beevor read a note on media for the cultivation of the tubercle bacillus, demonstrating the wide range of temperature at which these organisms would grow. Dr. S. M. Copeman showed specimens of urine containing hæmato-porphyrin, from cases which the author believed were allied to pernicious anæmia. In connexion with the latter disease Dr. Wm. Hunter had isolated from the urine certain putrefactive alkaloids which he believed were causative of destructive changes in the blood and of inflammatory lesions in the coats of the stomach. Dr. Samuel West described a case of chronic general nodular tuberculosis in which the lesions were of a kind common to some animals. An important communication was made by Professor Crookshank on the morphology, cultivation, and toxic products of the tubercle bacillus. Dr. Job Collins brought forward a case of asymmetrical kidney from atrophy of its fellow, and dwelt on the importance of recognising the occurrence of these cases when nephrectomy was contemplated. Mr. Stephen Paget showed specimens of imperforate anus, and pointed out the frequency with which other malformations were associated with these cases. Mr. Bland Sutton brought forward several specimens illustrative of comparative pathology. He showed a sheep's head with a cervical auricle, and a tooth which had been removed from a persistent second bronchial cleft in a horse. He likewise described an "implantation cyst" removed from an ox. Mr. Howard Marsh exhibited some loose bodies which had come from a knee excised for tubercular disease; and Mr. Bruce Clarke, at the same meeting, showed a piece of cartilage which had been chipped off the patella as the result of an accident. Dr. Galloway read a paper on a well-marked specimen of syringomyelia, and described its minute anatomy. An interesting case of tuberculosis of a tendon-sheath was brought forward by Mr. E. C. Stabb. Mr. Sydney Jones exhibited a specimen of perforation of the gall-bladder from calculi. Mr. William Anderson brought forward a case of fæcal fistula at the umbilicus associated with imperfect development of the large intestine, which terminated in a blind extremity six inches from the ileo cæcal valve. Dr. Albert Wilson gave a paper on the micro-organisms of diphtheria, with experimental results in animals. Mr. W. H. Battle showed specimens of epiphysitis obtained from long bones in infants under one year of age with disease at one or both articular ends. Dr. Voelcker showed specimens illustrating the involvement of the lung by caseous bronchial glands in children; the pulmonary changes in these cases he regarded as secondary. Dr. Délepine showed some cultivations of psorosperms, and stated that he had obtained typical examples from the viscera and skin in various diseases. Messrs. Shattock and Ballance related the negative results they had obtained with psorospermial inoculation of animals. Mr. Clutton exhibited a patient with a median hare-lip. Mr. Charters Symonds exhibited microscopical sections of the callus of simple fractures to demonstrate the process of ossification through cartilage. Mr. Shattock communicated the results of a research on the action of proteus vulgaris and of pyococci on urine. Mr. Bland Sutton accounted for the existence of the mandibular tubercle and cicatrices, drawing his illustrations from both human and comparative sources. Dr. Walter Sibley described the results of his experiments in inoculating tubercle into snakes. A careful description of a case of xanthoma diabeticorum was furnished by Mr. Malcolm Morris and Mr. Clarke. Dr. E. T. Wynne described a series of specimens illustrative of the origin of cysts in pachymeningitis hæmorrhagica; he denied the inflammatory origin of this affection. Dr. Herbert Larder described fully the lesions in a case of leprosy that had been under his care; he regarded the tuberculated and anæsthetic varieties of the disease as essentially similar.

The subject of intussusception was brought before the *Clinical Society* by Dr. Whipham, Mr. Turner, and Mr. Lockwood. Dr. Sidney Phillips dealt with the subject of typhoid fever, fatal at a late period, without intestinal ulceration, and he discussed the clinical signs, which were indicative of the latter complication. Dr. Hale White and Mr. Arbuthnot Lane described a case of stricture of the pylorus following upon hydrochloric acid poisoning, in which a modified Loreta's operation was performed. Cases of excision of the vermiform appendix were brought forward by Mr. Herbert Allingham, Mr. Sutton, and Mr. Andrew Clark, and were followed by an animated debate, in which the success of medical treatment in the early stages of these cases was insisted on. Dr. Gowers read an account of a case of acute atrophic paralysis in which there was a primary multiple neuritis. Mr. Pearce Gould described a peculiar case of symmetrical gangrene of the feet from obliterating disease and thrombosis of the arteries and veins, which he classed with the rare cases of primary arteritis obliterans. Mr. A. T. Norton communicated a case of popliteal aneurysm in a boy of seventeen caused by a femoral exostosis. Cases illustrative of the value of nephrolithotomy in the treatment of calculous nephritis were related by Messrs. Turner, Jacobson, and Pollard. The subject of gastro-jejunostomy was illustrated by a paper from the pen of Mr. W. H. Brown, and by cases exhibited by Mr. Jessett, Dr. Ewart, and Mr. Bennett. Mr. Arbuthnot Lane described the results of two cases of resection of the intestine by Senn's method. Mr. Charters Symonds related instances in which sequestra were removed from the neck of the femur without injury to the joint. Dr. Maclagan narrated cases of peripheral neuritis in which the nerve lesion was followed by changes in the joints of the knuckles and fingers. Dr. Handford, using a case of gastrostomy, was able to make experimental investigation of the movements and contents of the stomach. Mr. A. Lane read the notes of eleven cases of laminectomy which he had performed for compression paraplegia resulting from spinal caries. Dr. Churton, in a case of hæmorrhagic pericarditis, had attained a successful result by repeated aspiration. Dr. Lee Dickinson and Dr. Fyffe drew attention to the subject of albumosuria. Dr. Pye-Smith gave the details of a case of mycosis fungoides in which there was a secondary visceral growth simulating sarcoma. The clinical significance of rapid heart was discussed, the subject being introduced by Dr. Buckland, with an illustrative case.

Among other communications of interest to various Societies were the following:—Dr. Playfair, in a paper on the removal of the uterine appendages in cases of functional neurosis, held that the procedure was not justifiable in cases of pure neurosis, was not to be recommended in hystero-epilepsy or hystero-mania, and that, if structural disease of the appendages co-existed, the neurosis should be treated first in the hope that operation may be avoided. Dr. Herbert Spencer gave a valuable contribution to the study of the causation of still-birth, relating the results of 130 necropsies and pointing out the frequency of visceral hæmorrhage. Dr. F. J. McCann described six cases of chorea gravidarum, and gave an account of

the modifications of that disease during pregnancy. Dr. Herman discussed the relation between backward displacement of the uterus and sterility and abortion. Mr. W. A. Brailey read a paper on some points of the development of cataract, giving the results of analysis of a large number of cases. Miners' nystagmus among the South Wales colliers was discussed by Mr. Tatham Thompson, who considered that visual strain with insufficient illumination was as great a causative factor as strain of the ocular muscles, and that errors of refraction were predisposing causes. Mr. Treacher Collins made some very valuable observations on the glands of the ciliary body in the human eye. He had prepared his sections by bleaching them with chlorine. Mr. Richard Williams read a description of an interesting case of arterio-venous aneurysm of the orbit. Dr. Mules described the formation and pathology of pyramidal and central anterior capsular cataracts. Dr. Bronner gave notes of fifty cases of strabismus treated by advancement of a rectus muscle according to the method advocated by Schweigger. Mr. Kenneth Scott found that perchloride of mercury was of value in the curative treatment of trachoma and other conjunctival diseases. Dr. Beevor and Mr. Horsley related a case of traumatic abscess of the left angular gyrus, with right hemianopsia and word blindness, which was treated by operation. Dr. Edward F. Willoughby compiled a retrospect of the successive epidemics of cholera in Europe and America from 1830 to 1890. Dr. Dreschfeld described a case of acute lympho-sarcomatosis in which the course of the disease was very rapid and the blood appeared to be flooded with cells like those seen in lympho-sarcoma. Dr. Boxall emphasised, by means of an illustrative case, the fact that sepsis could occur after childbirth without fetor. Dr. Bewley read a statistical paper on the diagnostic significance of venous hum in the neck, in which he confirmed the conclusions previously arrived at by Apetz. Dr. Woodhead dealt with the question of the relation of modification of function of micro-organisms to the virulence and spread of specific infective diseases. Dr. Campbell Munro produced an epidemiological study of measles. Dr. M. A. Boyd, discussing the etiology of Cheyne Stokes respiration, reviewed all the physiological explanations of this phenomenon offered by writers on the subject since Stokes' time to the present day. Sir William Stokes gave his valuable experience of operations on the thyroid gland. Dr. Hingston Fox introduced for discussion the subject of albuminuria in relation to life assurance. The President of the Royal Academy of Medicine of Ireland introduced a valuable discussion before that body on the operative treatment of uterine cancer. Dr. Leith Napier, discussing the subject of the treatment of habitual abortion, urged the value of local measures, together with the prolonged exhibition of mercury. Mr. Bryant, in his capacity of outgoing President of the Harveian Society, delivered an able address on the treatment of internal intestinal strangulation and obstruction. The subject of the present position of disinfection was ably discussed by Mr. Wynter Blyth. Sir Charles Cameron drew attention to cases of illness caused apparently by eating aniline-coloured sweetmeats. Fuchsine was the dye used, and the author thought that it might be toxic even when free from arsenic. Dr. Louis Parkes read a very suggestive paper on the relations of saprophytic to parasitic micro-organisms. Dr. E. S. Reynolds related an instance of so-called spontaneous combustion, and classified all the reported cases. Dr. Hellier advocated abdominal section for pelvic abscess, where there was no pointing obvious in rectum, vagina, or groin.

Many discussions on the value of the "Koch" treatment for tuberculosis took place both in London and in the provinces, and a large number of cases that had been under treatment were shown. The "clinical evenings," as heretofore, have been an unqualified success, and the meetings devoted especially to discussions have been very fully attended.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 3791 births and 4106 deaths were registered during the week ending Dec. 26th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 22·6 to 19·1 per 1000, rose again to 22·8 last week. The rate was 21·9 in London and 23·5 in the twenty-seven provincial towns. During the first twelve weeks of the current quarter the death-rate in the twenty-eight towns averaged 19·9 per 1000, and was 1·5 below the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·2 in Leicester, 16·4 in Huddersfield, 16·5 in Birmingham, and 16·9 in Hull; the highest rates were 27·0 in Sunderland, 27·1 in Manchester, 28·1 in Liverpool, and 45·1 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had declined in the preceding three weeks from 477 to 395, rose again last week to 461; they included 170 from measles, 167 from whooping-cough, 39 from scarlet fever, 34 from diphtheria, 26 from "fever" (principally enteric), 25 from diarrhœa, and not one from small-pox. No fatal case of any of these diseases was registered in Brighton or in Halifax; in the other towns the lowest zymotic death-rates were recorded in Portsmouth, Bristol, and Hull; and the highest rates in Bolton, Manchester, Liverpool, Wolverhampton, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Derby, Manchester, Sunderland, Wolverhampton, Newcastle-upon-Tyne, and Cardiff; from scarlet fever in Huddersfield; from whooping-cough in London, Manchester, Wolverhampton, Blackburn, Bolton, and Newcastle-upon-Tyne; and from diarrhœa in Preston. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 34 deaths from diphtheria included 20 in London, 4 in Liverpool, 2 in Manchester, and 2 in Newcastle-upon-Tyne. No fatal case of small-pox was registered in any of the twenty-eight large towns; one small-pox patient was under treatment on Saturday last in the Metropolitan Asylum Hospital at Dartford, but not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1465, against numbers declining from 1554 to 1489 at the end of the preceding three weeks; 90 new cases were admitted during the week, against 137 and 109 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding three weeks from 449 to 337, rose again last week to 553, and exceeded by 51 the corrected average. The causes of 92, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Newcastle-upon-Tyne, Cardiff, and in four other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding three weeks from 32·2 to 26·0 per 1000, rose again to 27·1 during the week ending Dec. 26th, and exceeded by 4·3 the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 22·0 in Perth and 23·0 in Leith to 29·6 in Paisley and 30·6 in Aberdeen. The 698 deaths in these towns showed an increase of 29 upon the number in the preceding week, and included 16 which were referred to whooping-cough, 11 to diarrhœa, 5 to measles, 4 to scarlet fever, 4 to diphtheria, 1 to "fever," and not one to small-pox. In all, 41 deaths resulted from these principal zymotic diseases, against 59 and 50 in the preceding two weeks. These 41 deaths were equal to an annual rate of 1·6 per 1000, which was 1·0 below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 18 and 12 in the preceding two weeks, rose again last week to 16, of which 5 occurred in Glasgow and 4 in Aberdeen. The 11 deaths from diarrhœa corresponded with the number in the previous week, and included 4 in Dundee, 3 in Glasgow, and 3 in Edinburgh. The 5 fatal cases of measles were all recorded in Glasgow. The deaths from scarlet fever, which had steadily increased in the preceding four weeks from 4 to 11, declined again to 4 last week, of which 2 occurred in Edinburgh. The 4 fatal cases of diphtheria corresponded with the number in the previous week, and included 3 in Glasgow. The deaths referred to diseases of the respiratory

organs in these towns, which had declined from 331 to 246 in the preceding three weeks, rose again last week to 254, and exceeded by 72 the number in the corresponding week of last year. The causes of 64, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·2 and 33·9 per 1000 in the preceding two weeks, declined again to 29·1 during the week ending Dec. 26th. During the past twelve weeks of the current quarter the death-rate in the city averaged 28·5 per 1000, against 18·7 in London and 25·8 in Edinburgh. The 194 deaths in Dublin during the week under notice showed a decline of 32 from the number in the previous week, and included 9 which were referred to different forms of "fever," 5 to whooping-cough, 2 to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria. In all, 16 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·4 per 1000, the rate during the same period being 2·9 in London and 1·4 in Edinburgh. The fatal cases of "fever," which had been 11 and 7 in the preceding two weeks, rose again to 9 last week. The deaths referred to whooping-cough, which had increased from 2 to 4 in the previous three weeks, further rose to 5 last week. The 2 fatal cases of diarrhœa were below those recorded in any recent week. The 194 deaths registered in Dublin included 31 of infants under one year of age, and 57 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers in the preceding week. Three inquest cases and 2 deaths from violence were registered; and 62, or nearly a third, of the deaths occurred in public institutions. The causes of 18, or more than 9 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

SHAKESPEARE'S DEATH.

To the Editors of THE LANCET.

SIRS,—Although a little belated, I would fain make, with your permission, some remarks on the recently revived speculations as to the mode of death of one of the world's greatest men. For every intelligent lover of English literature, or even for every admirer simply of Shakespeare himself, the question of the dramatist's early death must ever have a keen though regretful interest. And it is little wonder that the modern spirit of scientific medicine should specially seek to utilise the results of accumulated research and observation in trying to explain the hitherto death-mystery of Shakespeare. But here we are face to face with a deplorable illustration of the saying that "the world knows little of its greatest men"; and as to the cause of Shakespeare's death we do not know, and are not likely ever to know, anything at all. For absolutely the only thread of information as yet known to exist, from which to weave any reasonable hypothesis, is unfortunately so slender and trashy as to be utterly worthless. The Rev. John Ward, Vicar of Stratford, as was not uncommon in those days, seems to have acquired a smattering of medical knowledge sufficient to induce the bishop of his diocese to grant him also a licence to practise medicine; and this clerical dabbler in physic and gossip, this "chronicler of small beer," close on half a century after the poet's death, resolved to immortalise himself by associating his name with Shakespeare's and giving to posterity some "facts" about the great Stratford man's history. These statements are embodied in his "Diary" under date 1662—a chronicle, no doubt, composed of a "halfpennyworth" of truth to an "intolerable deal" of gossip. The "facts" which he gravely records concerning Shakespeare's life are known to be very wide of the truth, and mere popular garbage; and the account of his death has on it the stamp of the same base coinage. He evidently knew nothing definite about the poet, his life, his works, his real nature and character, or his death. Indeed, the discerning student of Shakespeare has to-day a much better knowledge of the man Shakespeare, from his works and some authentic records, than Ward could have had. And, in my opinion, it is unquestionable that, after an appreciative and careful study of Shakespeare's whole works, no one can willingly entertain the suggestion that this man of noble mind and well-balanced character, of whom it might be said in his own words—

> "His life was gentle; and the elements
> So mix'd in him, that Nature might stand up
> And say to all the world, 'This was a man'";

who to the sanest sense and practical knowledge of the world and of the human heart united the first intuitions of the imaginative faculty and a profound respect for moral dignity; who, after twenty years of most copious literary production of such high quality, which scarcely can be reconciled with much dissipation, had retired to his own property in his native town to enjoy a life of refined leisure and some social dignity, and where, it is certainly ascertained, he was greatly respected and honoured: that this man, on the occasion of entertaining two of his oldest and most cherished friends, should give himself over to a drinking bout and guzzle himself into a "fever." The Rev. John Ward could not have held Shakespeare's memory in very high respect to accept and record for truth the vulgar slander of prejudiced ignorance and popular chatter; and it is highly probable that he did not, for the stage had little mercy shown it in those days, especially by the Church, and he would know little and care less about the playwright, his reputation, or his writings. From the tenor of the testimonies, on the other hand, paid to Shakespeare by some of his contemporaries, it may reasonably be inferred that among a set of convivial actors and dramatic authors he himself was at least comparatively temperate. And, moreover, at the time of his death he was surrounded domestically by a religious and even puritanic atmosphere, which would hardly be compatible with indecent conviviality in his own house. With your own remark that he himself in his writings lends some plausibility to the story I can scarcely agree; for it is one thing to be a creator of characters and a close observer of men, using material as an artist for true and realistic human effects, and quite another to be the character delineated. And it must be remembered that he has a Cassio as well as a Falstaff, a Prospero as well as a Caliban. The visit of Ben Jonson and Michael Drayton may be accepted as very probable, and by no means the first or only one, if unfortunately the last; and it is quite possible they may have had a "merry meeting" and taken too much. But they did not take "fever," which was "there contracted" by Shakespeare. On the whole, this debauch incident must be entirely abandoned as totally improbable, untrustworthy, and unsupported. And yet your smart American writer—for smart he certainly is—largely founds his theory on the "deep intoxication" of Shakespeare as exposing him to a chill which leads on to pneumo-paresis. This "fundamental fact" must be regarded as having no foundation in fact. Your judicial Daniel has even improved upon Ward, who says nothing of "deep intoxication," and he has also taken for granted what is not stated, that the illness was a very short and rapid one. It must, however, be admitted that three months before his death the poet commenced his will with the words: "I, William Shackspear, of Stratford-upon-Avon, in the county of Warwick, gent., in perfect health and memory (God be praysed!)"; but two months later, that is in March, he attested the will with his signatures, and these certainly show much shakiness, as if some illness were already telling on his strength. And although a large proportion of deaths in the end of April of people of fifty years of age may be caused by respiratory mischief, there were many other things a man of fifty might have died of in a low-lying midland county in the early years of the seventeenth century, and just on the eve of May-day. Drayton was a year older than Shakespeare, and Jonson but ten years younger; and yet these good fellows both lived on for many years afterwards free from pneumo-paresis. It was not rare in a low-lying, sheltered place like Stratford, on the lush, level banks of a river, to have a course of warm, moist weather in late spring; and there appears to have occurred early in that spring, what was not unusual after the winter, an inundation of the river Avon. To the dwellers in Stratford, therefore, with its imperfect drainage, impure water-supply, and defective

sanitation generally, such a condition of things and combination of evil influences were surely not much less perilous than a sudden change of temperature or an east wind. And there is no certainty that Warwickshire was specially exposed to east winds in the end of April. Chaucer writes:—

> "When that Aprile with his showres sote
> The droughts of March hath perced to the rote,
> When Zephyrus eek with his sweete breth."

Besides, Dr. Hall mentions in his "Select Observations," published by Cooke, that the very year after his illustrious father-in-law died a "new fever" was raging in the town, and might possibly have begun in the place the year before; for it is matter of unspeakable regret that the notes of this physician begin most tantalisingly in the year after Shakespeare's death. What this "new fever" was—whether typhoid, epidemic pneumonia, influenza, or some modified phase of malarial or rheumatic fever—it is impossible to say from the evidence at command.

The only other link in the chain of this "drunk and dying" theory is that of the look of "ineffable sadness" which has been detected in the bust of the poet. Whoever discovered this melancholic aspect of the Stratford bust before? And even if it were found to exist, would it be exceptionally wonderful, rare, or strange, or necessarily suggestive of death from pneumonia? There is no doubt whatever that the author of "Hamlet" during his lifetime bore many a time and oft a look of "ineffable sadness" in his noble face without suffering from pneumonia. And I have certainly never known a physician who could diagnose death from pneumo-paresis by looking at the expression on the face of a cadaver; such quick-sighted divination has but rarely reached the schools as yet, and must be limited to a very few specially gifted medical seers. And surely pneumonia is not the only cause of a look of sadness in dead faces. The eyes have a trick of seeing what the mind is wishful to see; and the primitive makers of the original cast and the humble sculptor of the Stratford bust copied from it, could not have dared to hope that the double operation would result in such perfect and minutely accurate work as your American writer supposes he has found it to be. Altogether, this point of the pneumonic physiognomy, true to a certain extent as it may be, which has been gathered from a probably imperfect, though generally reliable, bit of sculpture, is much too refined, artificial, and forced for ordinary mortals. I am pretty sure that, like the "deep intoxication," it has no real existence.

I cannot see, therefore, that the writer in the New York *Medical Record* has at all made out his case, however ingenious his hypothesis may be. It is quite possible that Shakespeare died of pneumonia, just as it is equally possible that he may have died of typhoid fever, rheumatic fever, bronchitis, influenza, or malarial poisoning of some kind, for we have no idea whatever as to the length of his illness. Instead of a "jury of the present day," provided they had an intelligent acquaintance with the poet's character and works, reasonably finding a verdict of "Death from pneumonia," I have no doubt whatever, if the evidence were fully given and severely examined, that their verdict would still be "Cause of death unknown." I have merely to add that your correspondent Mr. Foy, who, like myself, disagrees with the new suggestion, though for a somewhat different and, in my opinion, erroneous reason, has not been altogether accurate in his statements. He mentions that the period covered by Ward's diary, 1648 to 1679, was that "in which Shakespeare enjoyed his leisure and died;" while of course the fact is that that period was from 1613 to 1616. And again, instead of Dr. Hall being an "important witness," as he might well have been, it is a pre-eminently lamentable fact that he is silent about the illness and death of his now world-renowned friend and patient. For it cannot be doubted that he was the medical attendant in Shakespeare's last illness. But no hint is to be found in his "Select Observations" bearing on the case of his father-in-law; possibly his notes previous to 1617 have been lost. So that any diagnosis drawn from his notes must be entirely imaginary or a hypothetical inference from some vague facts of the family history. It is true that among the rank-and-file of the profession in those days the term "pleurisy" was employed to designate most forms of inflammatory chest disease; but among the better educated and cultured of the physicians, among whom Dr. Hall has claims to be reckoned, the affection known as "peri-pneumonia" must have been familiar, as it is distinctly recognised, described, and named by the old medical writers who were their authorities. The word "fever" also covered many undiagnosed inflammatory diseases as well as the specific and zymotic ones.

I am, Sirs, yours truly,

D. BEATTIE BAIN, M.D.

Airlie-place, Dundee, Dec. 21st, 1891.

ANTISEPTICS IN OPHTHALMIC SURGERY.

To the Editors of THE LANCET.

SIRS,—In to-day's issue of THE LANCET there appears a letter from Mr. Bullar in which he throws considerable doubt upon the benefits resulting from the use of antiseptics in ophthalmic surgery, and in support of his opinion he refers to an experiment in which, in spite of the use of antiseptics and every care, the rabbit's eye—the subject of his researches—very soon decomposed. But, Sirs, this experiment, to my mind, proves nothing at all; he is dealing with dead matter, tissue absolutely devoid of resisting power through any vitality of its own; and, curiously, he describes this experiment immediately after having mentioned Dubief's interesting paper, in which is demonstrated the practical impossibility of rendering an eye operation aseptic—i.e., that, after repeated washings and treatment with antiseptics, germs capable of multiplying and setting up mischief could still be discovered in the tissues by the microscope. Then what, under such conditions, is it that allows of a successful result in any case? Should they not all fail? Is it not the inherent vitality of the tissues, the superior fighting power of the leucocytes, or other resisting forces, which prevent such a disastrous termination to every operation? But may not antiseptics have something to do with the successful result; may they not act as the skirmishers and sharpshooters in less mimic warfare, crippling the germs and making them very sick, so that they may more readily receive the *coup de grâce* at the hands of the leucocytes &c., or, at any rate, be rendered powerless to make a breech in their opponents' bulwarks? Is it not a fact that both pan-ophthalmitis and plastic iritis—those two bugbears after extraction of cataract, and both, in all probability, septic in origin—are decidedly less frequent than before the use of antiseptics? Do not the records and experience of our metropolitan ophthalmic hospitals, situated as they are in places where germs most do congregate, bear out this statement? I think so. Because many operations are successful, though carried out under other than antiseptic principles, it does not follow that antiseptics are of no use; they may, perhaps, be only really necessary in an odd case or two in which the inherent resisting power of the tissues is not great enough unaided to wage a successful war with their microscopic foes; but as it is impossible to know such cases from others, it behoves us to treat all with equal care, then we can have nothing to reproach ourselves with. Even a good swimmer would not feel any the less secure in either smooth or rough water with a reliable swimming belt round his chest.

I am, Sirs, yours faithfully,

S. JOHNSON TAYLOR, M.B., M.R.C.S.

Prince of Wales-road, Norwich, Dec. 19th, 1891.

"ACUTE RHEUMATISM AND THE TEMPORO-MAXILLARY JOINT."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Lane's letter in your issue of to-day, I would say that when I exposed (what I represented to be) his premisses and upset his conclusions, I did not, as he suggests, do it unintentionally. To misstate an opponent's argument is bad, but to misquote his statements is worse, and Mr. Lane has twice been guilty of this offence; in his first extract from my letter he writes "and *even* with rheumatic arthritis" instead of "and *never* &c." This, though, may be a clerical error, and as such I leave it; but when in his next quotation he writes, "why should that joint be affected alone" instead of "why should that joint *never* be affected alone" there can, it is plain from the context, be no such error as I have supposed above. I feel too that he

must have read my letter so carelessly as almost to justify me in not replying, for not only does he quote the sentence wrong, but he makes it refer to rheumatoid arthritis instead of acute rheumatism, as in the original it most clearly does. This correction is sufficient answer to that part of the letter following and founded on the above misstatement. I fear I am intensely dull, but I cannot grasp the line of reasoning as to comparative and complete degrees of tendency to affection of certain joints. If my logic was "pre-Baconian," Mr. Lane's may be termed ultra-Baconian. That I have misstated Mr. Lane's argument I quite deny. I repeat that in his first letter he practically said "that because the temporo-maxillary joint is often affected with rheumatoid arthritis, and never with rheumatic arthritis, therefore it alone can never be affected with acute rheumatism." For he wrote: "The *only* [the italics are mine] connexion which is in my mind allowable is between affection of this joint and rheumatic arthritis." The only proof he adduces in support is the subsequent part of his letter, where he states that according to his observation the temporo-maxillary joint never is affected with rheumatic arthritis, and that it is very frequently the seat of rheumatoid arthritis—so often, in fact, that "the disease may be diagnosed with comparative safety by terming it rheumatoid arthritis should the temporo-maxillary joint be at all affected." I first wrote pointing out that I thought your correspondent had not sufficient grounds to upset Dr. Gallipe's diagnosis, as the statements in his first letter were all he brought forward to support his contention, and as there was evidence in Dr. Gallipe's report against rheumatoid arthritis and in favour of acute rheumatism, I can only repeat what I first said. In answer to Mr. Lane's last paragraph, his letter is certainly quite "enough," though not right enough, to show me any chimera of my own creation.—I am, Sirs, your obedient servant,

Freshford, Dec. 26th, 1891. CHARLES E. S. FLEMMING.

To the Editors of THE LANCET.

SIRS,—Apropos of some recent communications in your widely read journal on the above subject—Oct. 24th and Nov. 14th, 1891,—I would like to add the following peculiar case, also some few remarks and deductions from some recent experience, to me appearing to add weight to the microbic theory of the origin of the disease. A sailor, aged twenty-seven, employed as a guard over unruly and incorrigible apprentices, was suddenly taken ill in the night with shiverings and general pains. He presented himself for treatment on the following morning. He had only a moderately high temperature (101·5°), complained of pains in his back, neck, and principally in his jaws. Upon examination the temporo-maxillary joint was very tender, swollen, and mastication or movement of the jaws was impossible. He was known to be living under insanitary conditions most of the time, and there was suspected serious disease, possibly tetanus. He was isolated and placed under conditions of extreme quiet and careful management. On the third day the joints of the lower extremities manifestly became involved, the jaws could be opened slightly, and as no spasm of muscle or nervous phenomena occurred, the case was recorded as one of ordinary acute rheumatism and treated accordingly. It was next discovered that the patient had gonorrhœa, and the affection was thus finally placed in its proper category. It went on for a month, as a more or less painful inflammatory and septic affection of the ligamentous tissues of the body. The temporo-maxillary joint and contiguous structures, the hip and knee-joints, caused most anxiety and pain, and in the order named. The temperature averaged 102°, with a daily evening rise; the perspirations were constant; the urine not changed beyond being concentrated; and the pains exquisite, and requiring large amounts of narcotics and anodynes to keep him from crying out constantly. He was treated with alkalies, salicylates, quinine, and hot baths, the urethritis receiving proper attention. After using large doses of morphia, bromides, chloral, &c., with only partial success, to relieve his acute sufferings, we found that by using the ext. cannabis indica, in half-grain doses, for several hours, and at sundown a full dose of sulphonal in a large draught of hot water, painless sleep was procured. Now this was a case produced by an antecedent specific urethritis without a doubt. I have seen many cases of what we call "gonorrhœal rheumatism," but not one with such peculiar temporo-maxillary initiatory pronounced symptoms simulating a tetanoid condition of the neck and jaws. From some acute rheumatisms in my experience, not connected with gonorrhœa, but following an ulcerated tonsilar condition, I am inclined to believe that this disease is a septic or toxic infection pure and simple, and may be in the great majority of instances so demonstrated satisfactorily. When once these structures and tissues become disordered—the fibrous tissue—the liability to future exacerbations remains. This liability is most pronounced when the disease follows a specific urethritis. The cases following ulcerated tonsils showed not much fever or general articular lesion beyond moderate swelling, pain, and for short periods of time; and the symptoms were promptly controlled. The striking point, and a most serious element in the prognosis in these cases, is the strong tendency to lesion of the cardiac valves, notwithstanding every precaution employed. Whether a patient with vulnerable tonsils is also vulnerable at the cardiac valves is of importance, but I have been struck with these cases of moderately severe acute rheumatism following ulceration of these glands in the throat, and the sequence of disease of the heart valves.

In the contention whether acute rheumatism is or is not a germ disease, or, in other words, of microbic origin, the study of such variations in the course of the disease, when apparently following, and a sequence of, purulent inflammation of a mucous membrane, is of valuable interest and importance. It is not probable, if I may hazard the thought, that a single species of bacterium is the sole cause; or that all subjects are equally susceptible to the pathogenetic influence or toxicity of the pus organisms, or of an as yet unknown micro-organism, acting singly or in association; yet that the toxic influence is evolved during such suppurative inflammation of mucous membrane and glandular tissue, in which the well-known pus organisms chiefly figure, is in my observation a strong probability.

I am, Sirs, yours truly,

C. A. SIEGFRIED,

Newport R.I., U.S. America, Dec., 1891. Surgeon U.S. Navy.

CURIOUS ACCIDENT: A WARNING TO PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—On the evening of the 27th ult., when about to examine an infant's chest with my binaural stethoscope, unobserved by me the left ivory ear-piece dropped off. I let the instrument go into the ear in the usual way, and the spring being somewhat strong, the uncovered end pierced my membrana tympani with a fearful crash. I shall never forget the sensation! For a moment I thought an explosion had taken place, shattering the wall on the left side of me, and for an instant felt stunned. This was followed by nausea. About a teaspoonful of blood flowed from the ear. The next morning Sir W. Dalby did me the kindness of inspecting the damaged membrane, endorsing the diagnosis expressed above, and put me on a line of treatment for the injury. Curiously enough, to-day (Dec. 29th) I described the case to a medical friend who had precisely the same accident occur to him, but without such a serious result, and, strange to say, both our stethoscopes were made by the same firm of instrument makers, and the cause of the accident was the same in each—viz., too short a screw fixing the ivory ear-piece on to the metal work. In my instrument there was only one turn and a half of "thread" to the screw, which had served well for a time, but in opening the instrument the slight hitch had apparently jerked the ear-piece off, and this falling just as I was about to insert the tube into the ear escaped my notice to my cost. My object in writing this will be obvious to both practitioners and instrument makers, cautioning the one class to look to their fittings and the other to see that their workmen really do their work well. Of your usual kindness in promoting the welfare of the medical profession, both individually and collectively, I am well aware, and on this point of knowledge I beg to trespass on your valuable space in bringing this accident before my medical brethren.

I am, Sirs, yours truly,

London, Dec. 29th, 1891. A GENERAL PRACTITIONER.

THE CORPUS LUTEUM.

To the Editors of THE LANCET.

SIRS,—I do not know whether my friend Dr. Robert Lee will be inclined to place me in the rank as one who has had

experience of the kind required to justify an expression of opinion upon the much-vexed question of the corpus luteum or not, but I am perfectly confident that I have made sections of more ovaries concerning the actual history of which the facts were known than any man alive. I have only to say that my conclusion long ago made, and confirmed by every investigation which I have made, is that the belief that the corpus luteum is altered in any way by pregnancy, or that there is such a thing as a true corpus luteum or a false corpus luteum in relation to the fact of pregnancy, is one of the most extraordinary crazes which has crept into medical belief, and it has been productive of a very large amount of mischief. It is one of those assertions which has been made in the early investigation of ovular physiology and pathology, based on the assumption that ovulation is a monthly occurrence, and it has been handed down from writer to writer without any kind of substantiating proof, whilst the negative evidence against it is perfectly overwhelming.

I am, Sirs, yours truly,

Birmingham, Dec. 30th, 1891. LAWSON TAIT.

TRAUMATIC HYDRONEPHROSIS.

To the Editors of THE LANCET.

SIRS,—Under the above heading in your issue of Dec. 19th Dr. J. J. Knox describes a very interesting case, and refers to three descriptions of such cases in THE LANCET during the last ten years. If he will refer to the "Mirror" columns of THE LANCET for Sept. 12th, 1891, p. 612, he will find a very similar case recorded by me under the title of "Traumatic Renal Cyst." In that case a boy aged six was struck on the front of the abdomen, and five months later a large swelling was found in the right loin. This remained unaltered for six months, and was then aspirated by Mr. Paul Swain at the South Devon Hospital, Plymouth, an absolute cure resulting from this single tapping. There are two points to which I wish to draw attention—1. The operation performed by Dr. J. J. Knox. In a case where the history and symptoms so clearly pointed to the tumour being a fluid cyst due to contusion of the kidney, would it not have been safer first to have attempted to cure the urinary effusion by aspiration, and that failing, by lumbar incision, by which means the cavity is much better drained and the peritoneum not opened? The fact of a single aspiration being sufficient in our case I think proves that this measure in all similar cases should be first resorted to. 2. As to the name of the condition. Nearly if not all these cases of so-called traumatic hydronephrosis are really extravasations of urine around the kidney from a rupture of the kidney involving its pelvis. The urine is therefore behind the peritoneum. The term hydronephrosis ought to be restricted to cases of dilatation of the pelvis and calyces of the kidney due to obstruction to the outflow of the urine. Would it not be better, therefore, to call these traumatic cases by the name "retro-peritoneal extravasation of urine?"

I am, Sirs, yours faithfully,

Dec. 24th, 1891. W. GIFFORD NASH.

THE AFTER-TREATMENT OF PLASTIC OPERATIONS ON THE PERINEUM.

To the Editors of THE LANCET.

SIRS,—Dr. Griffith is undoubtedly right in laying stress on the importance of accurate apposition of the wound surfaces and edges in these operations; but however complete the success of this stage of the operation may be, it cannot protect the wound from the entrance of septic infection if the edges of the wound and the surrounding parts are soiled with decomposing organic matter. Bathing the parts externally cannot protect the wound from the influence of urine within the vagina if it is allowed to get, and to remain, there. It is an almost universal practice to prevent separation of the patient's thighs, while the wound is healing, by passing a binder round the knees. When micturition is performed under these conditions the stream of urine cannot pass away clear of the vulva as it should do, and the vulva and perineum are almost always wet in the act. Placing the patient in the prone position would not cause the urine to pass away clear of the vulva, and would have the disadvantage of risking an undue strain being put upon the wound in turning the patient over and back again. On the other hand, the douche can be administered with no greater disturbance of the patient than is involved in raising the pelvis two or three inches for a moment. The douche has this further advantage in cases of retention, that, acting as a hot antiseptic fomentation to the wound, it at once allays the irritation which, in most cases, is reflexly causing temporary difficulty in relaxing the sphincter of the bladder, and so obviates the necessity for passing a catheter.

I am, Sirs, faithfully yours,

Hanley, Dec. 21st, 1891. ARTHUR E. NEVINS.

INCREASED DIRECT REPRESENTATION.

To the Editors of THE LANCET.

SIRS,—I have just read Dr. Wilks' letter in this week's issue of THE LANCET with much interest. He lays down the fact that the General Medical Council was appointed to supervise medical education and registration, in order that the public might be supplied with "fully educated medical men." This is an undisputed fact. There was another purpose, however, for which the Council was appointed—viz., to watch over the moral character of the registered practitioner, and, if he acted wrongly, to expunge his name from the Register—i.e., they were appointed to maintain a moral as well as an intellectual standard *for the welfare of the public*. How has this work been done? Let us glance for one moment at the present state of the profession. Let us look at the consequences of the small fee system. 1. So many patients have to be seen in order to make a livelihood (self-preservation being the first law of nature) that sufficient time cannot be given to the diagnosis of each individual case. This leads to unsound treatment, or in many cases pure quackery, and the public suffer. 2. Many scientific, highly qualified, and high principled men have been driven out of the profession, in which they found themselves handicapped by their conscience, into some other pursuit, where, in the words of the labour orator, "a fair day's wage is given for a fair day's work." Those who can go, and those who cannot remain, and often are driven by dire necessity to improper conduct. 3. Poorly qualified, or in many cases absolutely unqualified, assistants are doing the work which the authorities and the public fancy is being done by properly trained men. Again the public suffer. These facts are known to every general practitioner in the land.

What is the attitude of the Council? Sir William Turner is reported to have said that "he hoped he should always sympathise with the struggles of those who were beginning professional life; but he entirely failed to see what the hardships and struggles of the poorer members of the profession had to do with this question."[1] Sir Dyce Duckworth is reported thus: "In what direction had the best interest of all parts of the profession been neglected at the Council?"[2] Sir John Simon as follows: "The Council was not called upon in any vague sense to promote the welfare of the profession."[3] Dr. Wilks says in his letter: "Finally, I have not heard one good reason why more general practitioners are required on the Council."

I can only say that the report on the debate in Council of Nov. 26th, 1891, gives one excellent reason—viz., that the representatives of the examining bodies are out of touch not only with the profession, but also with the public, whose interests they were appointed to watch over. The members of Council who spoke referred the direct representatives to Parliament, but there still remains the right of appeal by the practitioners of England to the Privy Council. If either of these courses is forced upon the practitioner, then reform (i.e., restoration of the profession to a state of purity and usefulness) is taken out of the hands of the profession and placed in those of the laity. Surely, this is not a question of slight moment, but is of vital importance to the public weal.

I am, Sirs, yours faithfully,

CHARLES PATTERSON, M.B., M.R.C.S.

City-road, E.C., Dec. 16th, 1891.

[1] THE LANCET, Nov. 28th, p. 1243. [2] Ibid., p. 1244.
[3] Ibid., p. 1244.

THE MEDICAL DEFENCE UNION.

To the Editors of THE LANCET.

SIRS,—The proposed alterations in the articles of the Medical Defence Union are retrograde and revolutionary in character. Although the report of the committee, which prepared the new articles, was on the agenda of the last Council meeting in London, it was withheld at the last moment for some ostensible reason. Hence it becomes necessary for me to appeal to the whole body of members. I shall merely allude to the introduction of a section into the new articles to prevent the annual meeting from petitioning against legislation injurious to the profession, as it did last time, contrary to the wishes of our valued, though somewhat self-opinionated, president. I believe this attempt to restrict the Memorandum of Association to be futile and illegal. The really serious matter, however, is the proposed change in the management of the Union. Hitherto all the officials and the Council have been directly responsible to the Union itself, each individual requiring annual re-election. This self-governing system has worked well and the Union has flourished. Now all this is to be changed. At the next annual meeting twelve members of Council are to be elected, and to them will belong the power of electing all the officials, the president of the Union, and as many vice-presidents as they choose. Nor are the twelve to be responsible to the Union by requiring annual re-election. They are merely to select from their number any three they choose to retire, or stand their chance of re-election. Now, suppose that the Council adopted a policy contrary to the wishes of the Union: an annual meeting could elect three members of Council opposed to such policy; but the Council can neutralise their influence by its election of vice-presidents &c. Briefly, the twelve members of Council elected at the next annual meeting under the new articles will have absolute and practically irresponsible control of the Union. The Council has power to act for the Union, and the acts of the Council are as the acts of the Union. This is a plain statement of facts, and I appeal to the members of the Union to pause before they hand over their powers to any twelve of their number. I believe that such a step will prove disastrous to the Union.—I am, Sirs, yours faithfully,

HUGH WOODS, M.D.,
Vice-President of the Medical Defence Union.

Highgate, Dec. 22nd, 1891.

INFLUENZA.

To the Editors of THE LANCET.

SIRS,—After reading the paper by Dr. Althaus on Grip and the letters of some others on different aspects of the same affection, I am tempted to reiterate the one or two points I ventured to bring forward in my note to you three or four months ago, in which I suggested that for a nervous fever of which the characteristic and diagnostic symptoms are to be found in tracts supplied by the trigeminal nerve, trigeminal fever is a truer and more connotative name than either grip (which is by no means universally descriptive of this disease, and might indeed, with as much or more propriety, be applied to other affections) or influenza (which is confessedly confusing and usurpative). Again, if there be anything in theory of eye infection or in collyrium treatment, then still more fitting becomes this term, "trigeminal fever." The point upon which I desire evidence, with your kind assistance, is the following:—In the few hundred cases seen by me during this present year the one single diagnostic point has been in the upper gum and labial frænum; this, indeed, has seemed as typical and decisive as one symptom can be of one disease. Skeptomai means: "I look that I may see." Surely no man has the right to be sceptical in loose, conventional parlance, unless he be such in derivative sense. Perhaps Dr. Althaus would prefer the term "bulbar fever"; but this implies a theory which, however probable, is not quite proven.—I am, Sirs, yours faithfully,

Hastings, Dec. 14th, 1891. G. HASSALL HUNTLEY.

NEW COTTAGE HOSPITAL AT LEDBURY.—Mr. M. Biddulph, M.P., has presented to the town of Ledbury, in commemoration of the coming of age of his eldest son, Mr. John Biddulph, a cottage hospital, at a total cost of about £300).

THE ORIGIN AND INSPIRATION OF "THE LANCET."

WE are indebted to an old and esteemed correspondent for the following article, which will, we are sure, be read with interest:—

The condition of the profession of medicine prior to and at the time of the founding of THE LANCET has been much traversed, and writers of the period have pointed out that in the hospitals as well as outside them there existed abuses such as would not be tolerated at the present day. Monopolies, cliques, time-servers, and place-hunters abounded, hindering most egregiously the progress of medicine as a science and the career of the medical student as an individual. Colleges and universities were not much in advance of the average state of matters, and, in some instances, it appeared that the unsatisfactory condition of the body medical was mainly attributable to their conduct. Metropolitan hospitals existed, as they do now, for the benefit of the poorer classes of the community, and collaterally to aid in the acquirement of a sound medical education. But they were practically closed to the medical profession. Men were appointed by influence to important positions in them who had "neither eyes to see, ears to hear, nor tongues to teach." That anyone should enter a hospital for the purpose of making notes of a lecture for publication was considered to be a species of poaching. The "game laws of physic" were as stringent as the laws relating to hunting in the time of William the Conqueror. The lecture was a secret—a mysterious thing of wonderful erudition—to the outside world, and even to many members of the profession. No one benefited from the opportunities of investigating disease clinically save those who were fortunate enough to have obtained one of the hospital appointments, oftentimes through the payment of vast fees to the leading members of the hospital staff. The public had no means of judging whether things were well managed or mismanaged within the walls of these medical sanctuaries. The medical profession was kept profoundly ignorant of what was in progress there. The student was neglected, any clinical instruction worthy of the name had not yet been called into existence, and the medical prescriptions were models of mystery.

This was the condition of matters in the metropolitan hospitals at the time when Napoleon the Great was on the island of St. Helena, a period renowned for the discussion of the question of the liberty of the Press, when Pitt the younger was Premier. It was a period of reformers, though many who began as such turned tail on discovering a policy which paid better. Men were replacing slaves in the colonies, and Cobbet was advocating political reforms at home. At this period a young student from the county of Devon enrolled his name in the archives of St. Thomas's Hospital. His robust appearance, athletic limbs, and general manly bearing, no doubt developed by two years' seafaring life in the Indian merchant service as a midshipman, attracted the attention of some of his teachers, and shortly afterwards became a favourite with the majority of his student colleagues. He was descended from the Celtic stock, the pure old British blood flowed in his veins, and he possessed all the essential qualities of the Celt — fire, impetuosity, strength, that courage which means manhood, the standing up for rights and doing battle in a noble cause. These were some of the qualities which young Wakley brought with him from the country hearth to the hospital on his entrance to the medical profession. His observation was keen, and he was soon speedily and painfully alive to facts of the kind which I have recorded above. He went through the dreary routine of the hospitals and the schools of that period and his spirit was stirred within him as he perceived in all quarters efforts to impart medical knowledge according to methods that a Highland schoolmaster of the last century would have been ashamed of. As

time went on the abuses to be rectified grew upon his mind with greater and greater intensity. He determined that the abuses so manifest should be rectified if possible. Things medical had come to a critical period. The tension between the various medical bodies was so strong that Mr. Wakley could not fail to observe it, the strong feelings which existed between the more thoughtful of the students and those responsible for the scant and often improper use which was made of the material at their disposal for their instruction, and, above all, the acute condition of matters between hospital teachers and the medical profession generally, started the train of thought which caused the name of this young student in after years to become synonymous with the champion of medical reform. The task he set himself was to remove, if possible, those conditions which had given rise to the high tension in the body medical. It required, he said, treatment similar to that upon which in our forefathers' time the physician relied for the disappearance of those morbid products, or "humours" as they were called, and which often led in the case of disease to complete recovery. Could the body medical be made subject to treatment of this kind. If so, it might be possible to bring about a profound change in the system of things as they then existed. Hence the origin of THE LANCET. This little instrument of steel, which, though now serving for the most part as a decoration for students' pocket-cases, must have afforded, according to high testimony, great relief to our forefathers, and, in many cases, must have prolonged life, notwithstanding the fact that Lord Byron has credited it with having slain more than the soldier's lance.

The action of the lancet was never punitive, but conservative of life and energy, and an agent used to purify the body from those deleterious products upon which its mortal ills depended. It occurred to Mr. Wakley that, by using the quill for purposes similar to those for which surgeons used the lancet, he might, in the body medical, get rid of much that was harmful; and, instead of its members tottering with premature decay, despised by all men, they might obtain a new lease of life and vigour, and be of greater service to the people in the country at large. Accordingly, in the year 1823, his energies were thrown with full power into a publication which was then indeed a "tiny instrument," and he issued, on the 5th of October of that year, the first number of THE LANCET. It extended only to thirty-six pages, but its effect was startling in the extreme; though tiny, yet so sharp and penetrating were the articles in this number, and withal so bold, that many were astonished at the apparent audacity of the little number. The comfortable hospital doctors beheld its appearance with trepidation. Quacks held their breath, malpractitioners were in alarm, and the medical public were quiet and expectant. Its statements and criticisms were courageous and full of manly vigour, and it sounded in medical literature a stirring note altogether different from the tone of its tame predecessors.

In illustration of the correctness of these statements a brief sketch of the contents of this first number of THE LANCET, published on Oct. 5th, 1823, at 6*d.*, by A. Mead, 201, Strand, will be sufficient. The preface expresses regret that no work existed which would convey to the public, to distant practitioners, and to students reports of the metropolitan hospital lectures. Then follows a surgical lecture, delivered on Wednesday, Oct. 1st, 1823, in the theatre of St. Thomas's Hospital, by Sir Astley Cooper, at which over 400 students were present, describing the duties of the profession, and advocating the practical aspect of medical education. General education was stated to be essential to the welfare of the profession. This lecture was reported specially for THE LANCET, and led to a prolonged struggle, which only terminated in the law courts. Then comes a section headed "Politics," with a sketch of Mr. Pitt the younger, who is described as "a character to whom England owes anything but gratitude. His admirers in rapture called him in his twenty-third year the boy statesman, and in his forty-seventh he was still the same, running after wild, impracticable schemes regardless of everything but the gratification of his own senseless and petty ambition." An intimation follows of the intention of THE LANCET to publish in the next number particulars of a case which excited much attention at the time—namely, that of Dr. Collyer. Interesting criticisms of the drama are next given from Drury Lane and from Covent Garden. In the medical and surgical intelligence, Henry Earle defends himself from Sir Astley Cooper's reply to his critical observations on fracture of the neck of the femur, of which Sir Astley, when he read them, was led to exclaim, "Good God! is this written by an English surgeon?" Next there is an account of a case of anasarca successfully treated by acupuncturation, in which "the arms and trunk were reduced in the course of a week to their natural size." A case of hydrocephalus chronicus in which pressure proved most beneficial is recorded by J. F. Barnard, Esq., of which the following gives the gist: "I had the head shaved perfectly clean. I then applied broad strips of adhesive plaster completely round the head from before backwards, and cross strips from the one side to the other, so as effectually to support the parietes of the cranium. Having decided on my practice, I waited patiently the result." The article ends: "It is now two months since the bandage was applied, and the child is in every respect healthy except that the head still contains water, and is larger than it ought to be. I shall recommend the bandage to be worn until the bones are fully united." What would be thought of such a procedure now? Mr. T. M. Greenhow, surgeon, records a case in which hydatids were discharged in considerable quantities from the intestines. They were of various sizes and of different colours, very nearly resembling boiled gooseberries and of about the same dimensions. An interesting ancient notion of the physiology of respiration is given in a paper on Obstruction of Blood in the Lungs, reprinted from the *Edinburgh Medical and Surgical Journal*, in which an attempt is made "to convince a person that the blood stagnates in his lungs every time he interrupts his respiration by uttering long sentences, and that that interruption endangers the rupture of a blood-vessel or engenders tubercular consumption." A remarkable illustration of the fatal effects of fear in the operation room, and a few medical extracts of an interesting character, are followed by an account of the composition of quack medicines, and three columns of table talk. The number concludes with a remarkable article on Southey, the Poet Laureate, in which he is set forth as a "Sack-hunting, hypocritical rhymer" and a "pretended moralist."

It was not for nothing that Mr. Wakley broke away with such violence from the trammels of professional precedence, and embarked in an enterprise which called for the most unbounded courage and the most enduring self sacrifice. At the end of the first year of the publication of THE LANCET the young editor was able to say, "We have successfully resisted an attempt on the part of the three surgeons of St. Thomas's Hospital to gag the medical press. We have effected some modification of the recent law of the College of Surgeons, the effect of which is to destroy all competition between surgical teachers. We are glad to announce that, in respect of our efforts, a regulation has now been adopted at the hospitals in the Borough, by which clinical lectures both in Medicine and Surgery are to be delivered weekly, and the surgeons in passing through the wards will be required to make observations to the students in an audible voice upon every case of importance." After more than sixty-eight years it is hardly possible for medical students to realise what was meant by regulations of this kind. In his efforts Mr. Wakley was well aware that he would be assailed by much interested opposition, but, that notwithstanding, he declared he would faithfully and fearlessly discharge his duty. Mystery and ignorance were to him synonymous terms. The time, he declared, was come when ceremonies and signs had lost their charms; hieroglyphics and gilded serpents their power to deceive. This was the keystone of the edifice of reform he was destined in after years to construct—the motive power which enabled him so successfully to remove the cobwebs of tradition and ignorance which overhung and obscured the condition of the medical profession. He was not the man to put his hand to the plough and to look back, but against delusion, sham, and cant he maintained his stand, an unknown youth, teeth clenched, and face determined, fronting the world and anticipating his own future in it, with something of that feeling which, call it what we may, in the light of retrospection, has probably, by a divine law, filled every great and honest heart at the outset of a great career. The object for which he lived has been beautifully put by Professor Masson in speaking of another genius whose life had been spent in a similar fight:—

> Lay the vain impostors low,
> Blockheads fall in every foe,
> Splendour comes with every blow,
> Let me do or die.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE election of Mr. Haslam as Surgeon to the General Hospital has given general satisfaction. It is felt that the traditions of the institution will be safe in his hands, and that the teaching strength will be considerably enhanced.

Christmas-time.

At most of the hospitals in the city there have been the usual festivities. The decorations have been in keeping with the season, and the generosity of the subscribers also. Whatever may be the feeling as to the propriety of keeping up the custom at the hospitals, and the necessary abstraction from other duties which it entails, no one having seen the happiness given to others, both young and old, who participate in the joyous proceedings, would grudge the efforts made to render the entertainments successful.

The New Coroner.

A suggestion of a useful kind has been made by the coroner for the city, Mr. O. Pemberton, that a society should be formed for visiting the homes of the poor and supplying fireguards when these are found to be absent. No doubt the number of cases of burns at this time of the year prompts the idea, which, however feasible in theory, might not be free from objection in practice on several grounds: the provision of such a precaution ought to be regarded as the duty of parents themselves, and might reasonably be insisted upon by precept or by a more forcible appeal.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Christmas Festivities to the Poor and in the Hospitals.

FOR years past it has been customary to give Christmas breakfasts and dinners to a large number of the deserving poor, this being effected by the liberal pecuniary donations of the rich, aided by contributions in kind from some generous tradesmen, who have contributed large quantities of tea, preserves, &c. A very large number of persons have thus been provided with a good breakfast or dinner, or both, and "the hungry have been filled with good things." The weather has been less severe—an agreeable change to the very old, the young, and indeed to all.

Jubilee of Mr. Henry Churton as Coroner for Chester District.

On Dec. 28th, 1841, Mr. Henry Churton, surgeon, was elected coroner for West Cheshire. On the corresponding day, 1891 (last Monday), he held two inquests at the Queen's Hotel, Park-entrance, Birkenhead. Advantage was taken by the foreman of the jury to offer their congratulations that he had been permitted to reach that memorable day, which was the jubilee of his coronership. They had always admired the faithful manner in which he had discharged the duties of his office, in the performance of which he neither coveted favour nor feared frown. They trusted that he would be spared to continue the faithful performance of his duties in the future as had been the case in the past. A member of the press present also congratulated Mr. Churton on the auspicious event, thanking him for the courtesy which he had always shown to the reporters in the discharge of their duties. In responding, Mr. Churton alluded with gratification to the fact that though Birkenhead had been incorporated as a borough and had its own court of quarter sessions, he had been appointed coroner to it as well as continuing in his office of county coroner. Mr. Churton is seventy-eight years of age, but in spite of this, and of a recent very severe illness, he enjoys excellent health, and was present at the funeral of his old friend, Mr. Clarke Aspinall, the late coroner for Liverpool, although the day was an extremely cold one. He then expressed to some of those present a hope that he might be able to discharge his duties up to the very last.

Theatres and Free Exits.

Boxing night has come and gone without any fatalities here. Before any theatre is licensed evidence must be given that it can, when filled, be emptied in a very few minutes. Moreover, the stage is now generally separated from the rest of the house by a fireproof curtain.

Dec. 29th, 1891.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Gateshead Calamity.

MOST of us in Newcastle heard for the first time on Sunday forenoon of the dreadful event which had taken place in the sister borough of Gateshead at the Theatre Royal on the preceding evening, and which resulted in the loss of ten lives. The story is very soon told; indeed, it is an old story: an alarm of fire, a panic, a rush down an ill-constructed gallery-stairs, where the sufferers fell, and were soon trampled to death or suffocated. An inquest is going on, but I do not think it can throw any additional light on the above statement of the event. Most of the medical men of Gateshead were on the spot to render all possible aid, but in proportion to the killed there were very few injured, and they were mostly sent to the Royal Infirmary, Newcastle, where they are doing well. Another of the injured has since died, making the eleventh victim of the disaster at the Theatre Royal, Gateshead.

Fire at Messrs. Atkinson and Philipson's Carriage Factory.

On Monday night last Newcastle was lit up with a lurid light which was seen to proceed from the direction of Messrs. Atkinson and Philipson's far-famed Northumberland coach works. It was soon evident that the whole place was in flames. The works are well known to most medical men in the northern counties. Fortunately no lives were lost, but the destruction of property was very great.

The Salt Water Supply at Tynemouth.

The *Newcastle Chronicle* has a good article on the system of salt water supply so long in use at Tynemouth, and which has proved such a blessing to the place and a comfort to the inhabitants. The system was introduced in 1875, under the then borough surveyor, Mr. J. P. Spencer. The pumps at the pumping station, of which there are two, are capable of each lifting 9000 gallons an hour. The water is raised to reservoirs and filter beds. The main reservoir is capable of holding 190,000 gallons, and is situated about a mile and a quarter from the pumps, with a rise of 150 feet. At present the town is intersected by about six miles of salt-water pipes. The water is laid on to private dwellings and public and private baths in the same manner as the ordinary town or potable water, and is supplied to householders at the very moderate rental of £1 per annum. The public baths are also supplied with salt water, and during the winter months these are in great demand. It is found, as regards street-watering, that the salt water keeps the roads and thoroughfares moist much longer than does the fresh. The salt water is likewise used for flushing the town sewers and latrines. It is pointed out in the article that for sixteen years the people of Tynemouth have adopted this practice, and, they believe, with excellent results, as they can point to a generally low death-rate; for instance, during the month of November last the average was 15·4, and for the four weeks ending Dec. 5th it was 19·9.

Darlington Hospital.

Dr. Simpson, who has been for some time house surgeon at the Darlington Hospital, has been presented with a purse of 30 guineas, of which £10 was voted by the committee and the rest subscribed by friends. The testimonial was accompanied with the regret of Dr. Simpson's friends at his leaving Darlington, and with best wishes for his success in his future career.

Tyne Port Sanitary Authority.

At the last meeting of the Tyne port sanitary authority it was reported that during the past two months visits had been made to 1358 British steamers and 342 sailing vessels, 321 foreign steamers and 203 sailing vessels, extra vessels 383, making a total of 2607 visits. At the same meeting the authority was asked to adopt a memorial which was about to be presented by Hull and Goole port sanitary authority to the Board of Trade, asking, amongst other matters, that the amount of space allowed to seamen be increased to 150 cubic feet, and compulsory provision of bath and lavatory accommodation be made. A spirited discussion took place on this subject, a member remarking that, compared with the time he was at sea, ships were now more like palaces, and that the air at sea was entirely different from what was to be had in towns. Dr. Armstrong, our able medical officer of health, however, re-

garded the proposal as an important one, and maintained that the air on board some small vessels was so bad that it could not be compared with anything on shore. In the end, the discussion was adjourned.

Influenza.

Influenza still continues rife in the north, and most practitioners are fully occupied. In the Cleveland district of North Yorkshire it is very bad. I have heard of a husband and wife lying dead together at New Marske after eight days' illness, and leaving four young children.

Cleveland Ambulance Centre.

The annual meeting of the Cleveland Centre of the St. John Ambulance Association was held recently at Middlesbrough. It was shown that the Association was doing excellent work, surrounded as the district is by mines and works where accidents occurred almost daily. During the year 818 persons had been instructed. Regretful allusion was made to the death of Dr. Duncan McCuaig, who had instructed the first class formed under this centre and five others of the fire brigade, also the borough police. Two thousand railway men had taken advantage of the concession of the North-Eastern Railway with regard to classes &c. The report dealt with other useful work done, and fully acknowledged the valuable assistance rendered by the honorary medical staff and other officials. Mr. Wayman Dixon, the honorary secretary of the district, may well be proud of his work.

Newcastle-on-Tyne, Dec. 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. Imlach, F.R.C.S.Edin.

MR. FRANCIS B. IMLACH, F.R.C.S.Edin., died with painful suddenness when out of doors last week. He was walking along one of the most frequented streets in the city when he was observed to fall. He was taken to the infirmary directly, but was found to be dead. Mr. Imlach was born in 1829, and was a native of Edinburgh. He practised as a dentist and held a prominent position in that department. He took an active part in the management of various public bodies, and in none more so than the Royal Infirmary, of which he had for a number of years been one of the board of managers. Some years ago he occupied the presidential chair of the Royal College of Surgeons of Edinburgh. As a man he was much respected by the Fellows of both the Edinburgh Colleges; while his genial and sympathetic manner and kindly words were often valued, and were not infrequently a strength and encouragement to those to whom they were extended.

Professor McFadyean's Appointment.

Those who know Professor McFadyean, while gratified with his appointment to the Royal Veterinary College, London, are grieving over the prospect of losing him from the inner circle of more active workers in Edinburgh. Professor McFadyean, although he has devoted himself to veterinary science, is a graduate both in medicine and science of the University. No man in Edinburgh has a higher reputation amongst those who know him as an honest and reliable worker. And those who have had occasion to seek his assistance and help, know how ready and willing he always is to give them. His appointment to the London Veterinary College is the highest tribute that could be paid to the value of the work he has done in veterinary pathology.

Health of Edinburgh and Leith.

The mortality last week was 129, and the death-rate 24 per 1000. Diseases of the chest caused 69 deaths, and zymotic diseases 5. The intimations for the week were: typhoid fever, 3; diphtheria, 6; scarlatina, 14; measles, 13. In Leith the number of deaths last week was 31, making the death-rate 23 per 1000.

Health of Aberdeen.

In his report for the week ending Dec. 19th, Dr. Matthew Hay draws attention to the great prevalence of influenza in the city, and he makes some remarks upon its prevention and treatment. He says that in his practice as surgeon to the members of the police force he finds large doses of salicin to be followed by the best results. During the week the following cases of zymotic diseases were notified:—Scarlet fever, 31; typhoid fever, 1; whooping-cough, 45; and erysipelas, 10.

Influenza in Glasgow.

The presence of influenza is evidently making itself felt in Glasgow. During the past fortnight there were registered in the city 805 deaths, representing a death-rate of 31·7, in place of 27·5, in the previous fortnight. Of these deaths 365, or 46 per cent., were due to pulmonary diseases; to influenza, 39, as compared with 11 in the previous period. Four of these influenza fatalities took place in the Royal Lunatic Asylum, Gartnavel. These deaths from influenza also were distributed with fair uniformity over the city; their distribution as to age was:—Under one year, two; one to five years, six; twenty to twenty-nine years, one; thirty to thirty-nine years, two; forty to forty-nine years, three; fifty to fifty-nine years, seven; sixty years, and upwards, eighteen; no fatal case between five and twenty years; while 46 per cent. of those who died from influenza were over sixty. Only six were certified as due to influenza pure and simple, the remainder to complications such as pneumonia, bronchitis, and pleurisy. The whole bill of mortality therefore bears the impress of influenza. The number of deaths due to acute diseases of the lungs has risen 27 per cent.; the death-rate of persons under one year had increased only 6 per cent., while that of persons over sixty had increased 22 per cent. The above-noted increase of mortality is the more striking when it is stated that zymotic diseases had fallen both in number and mortality. Yet so mysterious is this disease in its ways, though a supplementary fever hospital (in Parliamentary-road) has been reopened for the special reception of cases of influenza as well as of measles and whooping cough, only four cases were in it on Nov. 30th. Of this supplementary hospital Dr. Wm. Gemmell has been appointed physician superintendent.

Victoria Infirmary, Glasgow.

At their annual meeting a few days ago the governors of this institution were able to submit a very favourable report. During the year 926 patients had received treatment, while at the dispensary for out-door patients 4744 consultations had taken place. The average residence of each in-door patient was 29·9 days. The total deaths numbered 72, or 8·3 per cent.; deducting 20 cases (2·3 per cent.) in which the ailments or injuries were such that death occurred within forty-eight hours, the death-rate is reduced to 6 per cent. The cost of each fully occupied bed was £66 13*s.* 10*d.*, and the average cost per patient £5 5*s.* 4*d.* The total income exceeded the total expenditure by £2067 15*s.* 9*d.*; this sum has been transferred to capital account, which now amounts to £12,283 1*s.* 3*d.* It is satisfactory to note that of the sums received nearly £1000, or about a fourth of the ordinary income, has been contributed by workmen themselves. The infirmary is at present undergoing extension, another pavilion being added to it, which will raise its accommodation to 150 beds. A "nurses' home" is also nearing completion, providing a separate bedroom for each nurse, and a large common sitting or recreation-room. This home is to be furnished, at a cost of £500, by Mr. and Mrs. Renny Watson in commemoration of their silver wedding. The governing body of this infirmary is peculiar in this respect, that it includes three direct representatives of the contributing workmen. The privilege of sending these three governors is one highly prized by the working men, as furnishing a guarantee that their interests will be attended to. It is specially stated in the governors' report that the representatives hitherto elected by the workmen "have been of great practical service." Owing to the disappearance of some of the small burghs round Glasgow, which have now been merged in the city proper, certain alterations have to be made in the board of governors; three additional governors will be elected by the General Court of Contributors, and one additional representative will be elected by the workmen.

The medical classes in Edinburgh reopen on Tuesday, Jan. 5th.

The Aberdeen Medico-Chirurgical Society held its annual

dinner in the Society's hall on Dec. 15th, and there was a large attendance. In the unavoidable absence of the president, Dr. Garden, the chair was occupied by Dr. Angus Fraser, and Dr. Edmond acted as croupier.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. Edward J. O'Neill of Dublin.

DR. O'NEILL died last week at his residence, 6, Cavendish-row, Dublin, from typhoid fever, aged fifty-five years. Deceased obtained the M.D. of St. Andrews in 1858, and the licence in surgery of the Royal College of Surgeons in Ireland five years previously. He was a Director of the Apothecaries' Hall.

Trinity College Tercentenary, 1892.

A committee has been appointed by the Tercentenary Committee to provide for the reception of guests at the tercentenary celebration, and includes the names of Sir George Porter, Bart., the President of the Royal College of Physicians, Dr. Cruise, Sir John Banks, &c. The celebration will last from Tuesday, July 5th, to the following Friday, and will consist of a commemoration service at St. Patrick's Cathedral, the presentation of congratulatory addresses by delegates from various universities, and the conferring of honorary degrees on a number of distinguished visitors. There will also be a banquet and garden parties, the college races, and a ball. A play also will be performed in the Gaiety Theatre by students and graduates of the University.

Kilkenny District Lunatic Asylum.

Thirteen of the governors of the Kilkenny Asylum having resigned in consequence of the Board of Control having, contrary to their wish, expended a sum of money for the purchase of additional land to the asylum, the Under-Secretary has, in a lengthened letter, explained the action of the Board of Control. There were until recently only twenty-eight acres for over 300 inmates, and for some time past those who inspected the asylum strongly urged the absolute necessity of obtaining more land. In the last report issued it is stated that the asylum, containing more than 300 patients, has only about eight acres available for tillage attached to it. This has been brought under the consideration of the governors; but as yet they refuse to add to the estate, stating that the amount of land is sufficient; yet the resident medical superintendent reports that if the farm were of sufficient size he would be able to nearly double the number of male patients engaged in agriculture. Some adjacent land being about to be sold, the Board of Control recommended that the governors should purchase it; but as they declined, the ground in question was purchased by the Board. The governors regarded this as arbitrary, and accordingly the majority resigned. It must also not be forgotten that the duty of seeing that a lunatic asylum is properly provided with land is imposed by law on the Board of Control. A special meeting of the governors of Kilkenny Asylum will shortly be held to consider the letter of the Under-Secretary in reference to the dispute between the governors and the Board of Control.

Cork Hospital Saturday.

The amount at the disposal of the committee, after defraying all expenses, for distribution to the various hospitals will be something over £600.

A woman named Stretton died recently at Tralee, aged 108 years, and on the same day a woman named Moriarty died at Barrow at the age of 104.

Dec. 29th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Mercury, Syphilis, and Tabes Dorsalis.

THE literature of that interesting clinical discussion, the supposed or pretended connexion between syphilis and its mercurial treatment on the one hand and locomotor ataxia on the other, received a fresh contribution from that eminent syphilographer, M. Fournier, at a recent meeting of the Academy of Medicine. Two reasons, he said, determined his undertaking this inquiry: First, the supervention of tabes in two of his patients in spite of a rational, regular, and sustained course of antisyphilitic treatment; and secondly, the necessity of judging at its proper value the accusation brought forward against the mercurial method of being a cause of tabes in syphilitic subjects. In proof of this the deleterious action of mercury, when abused, on the vessels and vascular endothelium was advanced, whence it was concluded that degeneration or sclerotic changes in various tissues, amongst them the nervous, were possible, and hence tabes dorsalis. M. Fournier's inquiries into this gravely important question extended over 321 cases of locomotor ataxia in syphilitics. As a result of his analysis of their cases he concludes that mercury must be put *hors de cause:* First, because amongst these 321 cases twenty-four became tabetic without having ever had mercury administered to them in any shape; and, secondly, because he is able to show conclusively that the number of syphilitic subjects who develop tabes is in increased ratio to the length of time mercurial treatment was carried on. For instance, amongst twenty-three syphilitics subjected to mercurial courses who developed tabes he found that no fewer than twenty-two were treated for various terms of less than one year, while only one developed disease of the posterior columns after a mercurial course lasting from two to four years.

Functions of the Thyroid Gland.

At a late meeting of the Biological Society M. Gley recorded the results of some experimental observations he had made on the thyroid. Removal of this gland was followed by death in the rabbit and dog. He found, however, that this was not the case if two small accessory glandules situated on each side below the main structure were left. These soon developed, and took on apparently the function of the entire gland as before. He referred also to the apparent connexion as to function that exists between the thyroid and pituitary bodies, and demonstrated the trophic *rôle* which the latter structure plays in the rabbit and the dog. He showed a dog in which he had removed the thyroid entirely, but which had survived to cicatrisation by means of intravenous injections of an extract from the tissues of the glands. Later on the animal showed signs of trophic troubles analogous to those which supervene on the removal of the pituitary body.

Ocular Troubles in Influenza.

M. Galezowski records that as a result or complication of influenza he frequently found spasm of the arteries of the retina. This spasm was manifested by a passing sensation of dazzling, and by an amblyopia which lasted from a few hours to some days. Examination of the fundus revealed the branches of the central artery of the retina contracted and almost effaced from view. He concludes that the amblyopia was purely dynamic, and was perhaps due to some toxic substance secreted by the microbe of this singular disease acting on the vaso-motor nerves. Sulphate of quinine generally relieved the condition.

Unusual Foreign Body in the Rectum.

At the Surgical Society M. Marchand showed a wine-glass which he had extracted from the rectum of an individual seventeen hours after its introduction. After several ineffectual attempts to get it away through the anus, he found it necessary to incise the posterior wall of the rectum and perineum. The operation was quite successful, for fifteen days after the suturing of the bowel the patient was discharged with a sphincter perfectly reconstituted.

Recurrent Erysipelas: its Pathogenesis.

This curious ailment was the subject of discussion at the Société Médical des Hôpitaux on Dec. 18th, a paper contributed by MM. Hirtz and Vidal being of special interest. The basis of these observers' communication was the case of a barge woman, aged thirty-three, who was wrecked four years ago, and in whom menstruation, up to that time regular, has not reappeared. Four months after her rescue she suffered from a first attack of facial erysipelas, the invasion of which was marked by a rigor, and which, involving the scalp, was accompanied by severe general symptoms. The attack terminated on the

ninth day, and was attended by loss of hair. A week later the disease reappeared on the face. During a sojourn of four months at the Hôpital Necker the patient had two relapses. It is to be noted that neither the foregoing nor any subsequent seizure coincided with what should have been the menstrual period. Up to her admission in December, 1890, into the Hôpital Cochin only once had she been free from an attack for two consecutive months, the erysipelas often relapsing several times a month. She entered that hospital to be treated, not for erysipelas, but for Bright's disease, the symptoms being general œdema of the face and limbs, copious epistaxes, dimness of vision, a well-marked *bruit de galop* (reduplication of the first sound), and albuminuria (1 or 2 grammes of albumen per litre). Between Dec. 24th, 1890, and March 31st, 1891, she suffered from at least twenty attacks of erysipelas, the part affected being now the face, now the upper and inner surface of the thighs. In the latter case the blush always radiated from patches of eczema similarly situated. The attacks were always mild, the temperature rarely reaching 100·4° F., and the duration being variable, and often not exceeding a few hours. On April 14th, however, there occurred a fresh attack, characterised by violent rigors, high fever (104·9° F.) persisting for a week, great disfigurement of the features and scalp (large phlyctenulæ developing at those situations), together with disquieting adynamic symptoms. On the tenth day the temperature fell to the normal point, and convalescence set in. In the course of the succeeding month she had three mild apyretic attacks of brief duration. Pure cultures of streptococcus were procured from specimens of blood taken respectively during a mild attack on March 26th and during the severe attack above mentioned. The March culture inoculated into the ears of two rabbits gave rise in the one to the most violent experimental erysipelas ever witnessed by MM. Hirtz and Vidal. The local infiltration was enormous, and the temperature rose to 106·7° F. In the other rabbit death supervened in forty-eight hours. There was discovered post mortem splenisation of the lungs and dessemination of the streptococcus in all the viscera. The absence of synchronism between the suppressed menstrual periods and the accesses of erysipelas is a noteworthy circumstance in this case. Instances of vicarious monthly attacks of facial erysipelas occurring during the menopause are not infrequent. The authors of the paper under consideration cite an example in a woman of fifty. The occurrence of nephritis after four years of recurrent erysipelas is a proof that sometimes, at any rate, the albuminuria attending erysipelas may become permanent. Dr. Pye-Smith, in his classical work,[1] states that this is a very rare event. The presence of *portes d'entrée* to the streptococcus in the guise of eczematous patches on the thighs (and in the case cited of menopausal erysipelas of a similar patch on the ear) lends support to the now generally accepted assertion of Trousseau that a local lesion of some kind is always demonstrable in these cases if a careful search be made. The case also teaches us that, however mild the majority of such attacks may be, the onset of a serious one is to be apprehended. In the course of the discussion raised by the reading of the above paper, M. Labbé expressed doubt as to the authenticity of so-called menstrual erysipelas, believing that it is really only erythema. This view was strongly combated by MM. Guyot and Rendu. The latter physician reminded the Society that, when the view now advanced by M. Labbé was some years ago promulgated by the late Maurice Raynaud, the Society rejected it by an overwhelming majority. M. Rendu remembers well how erysipelas in a severe form was once communicated at the Hôpital St. Louis to a neighbouring patient by a woman who was suffering from one of these trifling apyretic attacks.

Dec. 29th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Influenza.

THE Medical Department in the Prussian War Office has published a book on the influenza epidemic of 1889-90 in the German army. The number of cases was 8778, and the epidemic spread from north-east to south-west. The book contains highly convincing proofs of the infectious character of the disease. It is copiously illustrated, and treats also of the causes, treatment, and prophylaxis of the disease. On Dec. 17th Prof. Nothnagel of Vienna lectured to his students on influenza. After expatiating on the history of influenza and its dissemination this year, he continued as follows: "The following questions of general interest arise. How far is one protected in influenza against relapses? Does one attack confer immunity or not? Does it leave the patient more predisposed for a second attack or less? From the observations hitherto made one may say that one attack does not increase the predisposition; whether it diminishes it will perhaps now appear; but here, too, one must say, 'Non liquet.' One thing is clear—influenza is an infectious disease. Despite all bacteriological investigations, the specific agent of infection has not yet been discovered. In short, in spite of all descriptions and investigations, we have a great chaos before us, but no clearness. One thing is beyond doubt: influenza may certainly be miasmatic, for it was observed that the epidemic spread at a rate much more rapid than that of human intercourse. As regards the symptoms, we adhere to the old classification, and distinguish between nervous, gastric, and catarrhal influenza. The virus of influenza shares with many other microbes the quality that it infects and affects the whole body; the most various parts of the frame may suffer from it. It has struck observers from of old that the fatal cases of influenza are mostly those in which the organs of respiration are affected. Slight croupy pneumonia may occur in influenza and along with it. Apart from this, however, there is a genuine influenza pneumonia which, owing to its severe effect on the heart, is more dangerous than bronchial pneumonia. The prognosis is very various. Weak persons and those who suffer from heart disease or tuberculosis seem to be exposed to greater dangers than others." In conclusion, Professor Nothnagel spoke of the treatment of the disease, declaring that there is no specific against it, and that the treatment must be symptomatic, and most decidedly warning against all experiments with antipyrin and antifebrin. In the week which ended on Dec. 12th the number of deaths in Berlin from influenza was eighty.

Rifle-shot Wounds.

In a recent lecture the celebrated surgeon Professor von Bardeleben stated that wounds inflicted by the new rifle bullets are simple round holes. He reported on two wounds caused by the firing of sentinels. In one case the bullet had gone through the knee-joint of a man, and the wound healed so completely that the mobility of the joint was unimpaired. In the other case the bullet struck a young lady in the thigh without striking a bone. The only treatment was the application of an antiseptic bandage, and when the bandage was removed the wound was completely healed.

Death of Dr. Ignaz Hirschler.

Dr. Ignaz Hirschler, the pioneer of modern ophthalmology in Hungary, died the other day at Pesth. He was born at Pressburg in 1823, and studied medicine in Vienna. After having been for some time assistant to a distinguished ophthalmologist there, named Anton von Rosas, he went to Paris, where he studied under Desmarres. In the clinic of that physician, then the gathering-place of ophthalmologists from all parts of the civilised world, he met Albrecht von Graefe, to whom, with Helmholtz and Donders, the world mainly owes the enormous progress which has since been made in ophthalmology. In 1849 Hirschler returned to Hungary, and established himself in Pesth. For a long time he was the only ophthalmic surgeon in Hungary. He published most of the results of his observations in Graefe's *Archiv*. Among the most important of his writings are those on cysticercus in the anterior chamber of the eye, disturbances of vision due to alcohol and tobacco, and pigmentation of the cornea. Though not an official teacher in any university, he gave courses of private lectures on ophthalmology, which his position in a hospital enabled him amply to illustrate. He also took part from time to time in political life.

The Virchow Jubilee.

The financial surplus of the Virchow Jubilee amounts to 23,550 marks. Twenty thousand were saved by the Festal Committee from the proceeds of the great collection, and the remaining 3550 are the publishers' payments for the

[1] Practice of Medicine, vol. i., p. 254.

contributions to the festal work, the collaborators of which friends and former assistants of Virchow preferred in this case to work without reward. The whole surplus has been added to the Rudolf Virchow Fund for the support of scientific investigations, which amounted before this addition to 97,000 marks. Some thousands, it is true, will have to be refunded, for the Festal Committee has resolved, with Virchow's consent, to distribute bronze casts of the Virchow medal to the most eminent European pathological anatomists and to the corporations which took part in the jubilee.

Professor Graefe.

Professor Graefe, a cousin and very distinguished pupil of the famous founder of modern ophthalmology, Albrecht von Graefe, has resigned his office as head of the eye clinic of the University of Halle.

Dr. Paul Michelson, of the University of Königsberg, died two or three days before Christmas.

On the occasion of the fiftieth anniversary of Professor Bardeleben's graduation, the Emperor conferred on him the distinction of hereditary nobility.

Professor Billroth is suffering from influenza.

Owing to the prevalence of yellow fever in Brazil, and especially in Santos, all ships arriving at Hamburg from there have to be disinfected.

Berlin, Dec. 29th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Prophylactic Measures to Prevent Cholera.

IN view of the International Quarantine Commission so soon to take place at Venice, it will be interesting to note what Egypt did to guard herself against any possible outbreak of cholera during the summer of 1891. The disease broke out in Mecca in July, and was also known to be lurking in Syria, so that Egypt seemed menaced from two points. During the months of August and September 11,950 returning pilgrims were received at the quarantine station of El Tor; themselves and their clothing were thoroughly washed and disinfected, and though 121 deaths occurred among them, only six were victims to cholera. It is most satisfactory to note that no cholera appeared in the track of these pilgrims, though the disease broke out again in Syria shortly after their return there. Some 450 pilgrims, mostly camel drivers, returned to Egypt by the land route, and, as usual, arrived in good health. In Egypt itself strict measures were taken to enforce an amount of cleanliness, which is unhappily habitually absent from this country. Responsible committees were formed in all the chief towns to inspect nuisances and insist upon sanitary reforms. All worked with a will, except the representatives of the Wakfs, the Ecclesiastical Department, who do their utmost to obstruct real progress. The following list will give an idea of what was done during the summer months, and it is to be hoped that the Government may in the future be induced to carry out a similar "spring cleaning" every year. Some 13,000 Cairo huts were cleansed and whitewashed, besides an equal number in the provincial towns, while more than 3000 of the worst of them were destroyed; 2000 more were condemned, but have not yet been demolished; 1700 small inns, half of which were in Alexandria, have been cleansed and whitewashed, and 700 others were condemned and closed; 220 of the public baths were shut up, and 710 others were well cleaned. Nearly 4000 mosques were forced to have their latrines cleansed and whitewashed, but there remained 1800, mostly in the country towns, where sufficient sanitation was not carried out; 629 drains leading directly into drinking water canals were peremptorily closed, but the Commission reported that there remained 118 drains in Behera province to be so treated, and 79 more in Guergeh province. 7514 of the low-class stables and shops were treated with whitewash, and 642 public kitchens were overhauled, while in Cairo alone 1719 tripe shops were compulsorily made clean. Rags and bone warehouses were banished to the outskirts of towns. 14,643 private houses of the lower classes were whitewashed in Cairo alone, besides 13,540 of the small shops and coffee houses.

Sanitary Department.

Brigade-Surgeon Green Pasha has been compelled to resign his post as director of the sanitary services in consequence of incurable deafness. He is fortunate in having enlisted under old pension rules, which entitle him to a life allowance of £600 a year after only seven years' service. By the existing rules he would be entitled only to a bonus of £700 and no yearly pension. The higher officials of the department presented him with a gold and silver coffee-service and tray as a mark of sympathy with his physical affliction. Surgeon-Major Rogers Pasha, his successor, has for the last eight years been the principal medical officer of the Egyptian Army.

Influenza reimported from Europe.

At the end of October last an English steamer arrived at Alexandria having on board some passengers who had just left influenza-stricken friends in Spain. Two families became ill on board, and carried the disease ashore with them, so that several cases occurred during November in Alexandria, Mansourah, and Cairo. The patients are chiefly confined to the families of those who had travelled on this steamer, and the disease has shown no tendency to spread universally.

Government Hospital at Alexandria.

This hospital continues to improve, and the new out-patient department is now attended by 200 natives every day, who testify to its popularity. His Highness the Khedive recently visited it in order to inaugurate a small mosque chapel which has just been completed for the use of the in-patients. The experiments upon lepers with Koch's tuberculin have now been discontinued, for though there was perhaps a very slight improvement in some cases, there was not sufficient to encourage either doctor or patient.

Cairo Medical School.

The only medical school in Egypt is about to lose its director, whose resignation has been demanded by the Government in consequence of some late intrigues among the native professors and insubordinate conduct on the part of the principal. He was removed in 1884 from the control of the Quarantine Service, and in 1885 from the Sanitary Department for various irregularities. He is to be succeeded by Dr. Ibrahim Pacha Hassan as director, and by Dr. Keatinge as vice-director. Dr. Keatinge was one of the English medical officers attached to the Egyptian Army for six years, and now for more than a year has been professor of anatomy in the medical school. His new appointment will give him fresh opportunities for continuing the good work which he has already begun.

Cairo, Dec. 7th.

Obituary.

SIR J. RISDON BENNETT, M.D., F.R.C.P.

JAMES RISDON BENNETT was the son of the Rev. Dr. Bennett, a learned Nonconformist divine, and was descended through his mother from Risdon Daricott, a man of great piety and worth, who is mentioned in the "Dictionary of National Biography." After choosing the medical profession he was apprenticed to the late Mr. Thomas of Sheffield, and afterwards studied at Edinburgh, where he took his degree in 1833, and soon after went abroad as travelling physician to one of the Earl of Aberdeen's sons. He spent some time at Rome, and became acquainted with French, Italian, and German. After his return to England he was for a time connected with Charing-cross Hospital, but soon afterwards was appointed assistant physician to St. Thomas's, then and for many years afterwards in the place where it was founded, in the borough of Southwark. Subsequently he joined the new Hospital for Diseases of the Chest at Victoria-park and became an accomplished auscultator. During the greater part of his professional life Dr. Bennett lived in Finsbury-square, near his friend and neighbour, the late Dr. Jeaffreson of St. Bartholomew's Hospital, Dr. Peacock, his colleague at St. Thomas's, Dr. Gull of Guy's, and Dr. Herbert Davies of the London Hospital.

Here he had a good City practice for many years. Here he brought up his family, and here he sustained a severe bereavement in the loss of his eldest son, a barrister of great promise. He moved to Cavendish-square in 1876, the year in which he was elected President of the College of Physicians in succession to the late Dr. Alderson. He filled this high office during five years with characteristic dignity and judgment. He had previously served several offices at the College with credit, and had delivered the Croonian Lectures on Bronchitis in 1863, and the Lumleian Lectures on Intra-thoracic Tumours in 1870. After he had retired from the chair he continued to be a constant attendant at the comitia, and occasionally spoke with clear, good sense and apt expression, equally free from the heat of youth and the captiousness of old age.

He took an active part as chairman of the Organising Committee in preparing for the International Congress of 1881, and at the first general meeting at St. James's Hall welcomed the assembly in a well-worded and well-delivered French speech. In his later years Sir Risdon Bennett's opinion was frequently sought by Government, and he was well known in the City as a consultant in cases of life insurance. It was much regretted at the time that he was not put on the Royal Commission which dealt with the proposed University in and for London; the marked absence of any member of the medical profession on that Commission was justly resented, and Sir R. Bennett's great experience, impartiality, and judgment would perhaps have prevented the divided report which has led to the present unsettled state of the question. At the advanced age of eighty-two Sir R. Bennett had still full possession of his faculties and a considerable share of bodily strength. He went safely through a sharp attack of influenza last spring; and those who attended the Section of Medicine at the meeting of the British Medical Association last July at Bournemouth will remember how vigorously, tersely, and genially he took part in one of the debates. Soon after, however, his memory of words began to fail, and, early in October, he consulted a medical friend on the subject, stating the symptoms with his usual clearness and appreciation, and bringing a prescription which he had failed in writing as evidence of the degree of agraphia as well as aphasia. From that time he passed, by gentle and painless gradations of decay, to the closing scene. His funeral at the King's Weighhouse Chapel was attended by the President, Treasurer, and censors of the College of Physicians, by the senior physicians of the chief hospitals, and by many other professional friends; while other contemporary and attached colleagues were only prevented being present by the infirmities of advanced age. Sir Risdon Bennett was tall, with a grave and dignified aspect and a pleasant smile, a courteous and hospitable host, a good talker, but content to take his share in conversation; excellent on a committee, sagacious in consultation. He was scrupulously exact and honourable in all the relations of life; and, while far from anything like cant, maintained in practice as well as in profession the high standard of Christian conviction. He published little, his Lumleian lectures and a few contributions to the medical societies being almost the whole of his printed works; but he occasionally wrote slighter papers, the last of which was an interesting memoir of the private and religious life of the great Haller. He left three sons and three daughters; one only, Dr. Selfe Bennett, follows his father's profession. He had so long left his hospital that he was scarcely known to any except the senior members of the staff; but at the College of Physicians and among many of the oldest and most honoured of the profession his good company, his *mitis sapientia*, and his staunch friendship will long be remembered with affectionate regret.

THE SERVICES.

Surgeon-Lieutenant-Colonel J. G. Rogers, Army Medical Staff, who has been Principal Medical Officer of the Egyptian Military Forces since November, 1883, is, we learn, about to vacate that position, having been offered by the Khedive the appointment of Director-General of the Board of Health.

ARMY MEDICAL STAFF.—Brigade-Surgeon-Lieutenant-Colonel John Butler Hamilton, M.D., to be Surgeon-Colonel, vice E. G. McDowell, C.B., retired, and Surgeon-Lieutenant-Colonel George Joseph Hamilton Evatt, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice J. B. Hamilton, M.D. (both dated Nov. 30th, 1891); Surgeon-Major-General D. A. C. Fraser, M.D., having attained the age of sixty, has been placed on retired pay.

ARMY MEDICAL RESERVE OF OFFICERS.—The surname of Surgeon F. St. J. Kemm, 3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry), is as above, and not as stated in the *Gazette* of Dec. 1st, 1891.

VOLUNTEER CORPS.—*Artillery:* 1st Cumberland: Surgeon-Captain J. A. Macdougall to be Surgeon-Major (dated Dec. 30th, 1891).—1st Devonshire (Western Division, Royal Artillery): Arthur Goulston, Gent., to be Surgeon-Lieutenant (dated Dec. 30th, 1891).—*Rifle:* 2nd Volunteer Battalion, the East Lancashire Regiment: Surgeon-Lieutenant-Colonel L. Fisher, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Dec. 30th, 1891).

Medical News.

UNIVERSITY OF LONDON.—The following gentlemen have passed the examination for Honours at the recent B.S. examination:—

First Class.—George Francis Blacker (Scholarship and Gold Medal), University College; Herbert Geo. Graham Cook (Gold Medal), St. Bartholomew's Hospital; John Lloyd Roberts, M.D., B.A., B.Sc., Guy's Hospital; Ransom Pickard, St. Bartholomew's Hospital, and Wm. Gusterson Rogers, Guy's Hospital (equal).

Second Class.—William McAdam Eccles, St. Bartholomew's Hospital; Thomas Benjamin Philip Davies, Guy's Hospital; Robert Henry Elliot and Holburt J. Waring, B.Sc., St. Bartholomew's Hospital (equal); Thomas Philip Cowen, St. Thomas's Hospital, and Harold Hodgson, Guy's Hospital (equal).

Third Class.—John Edward Platt, M.D., Owens College and Manchester Royal Infirmary; Alfred Theodore Rake and Arthur Stanley Wohlmann, Guy's Hospital (equal); Harold Meredith Richards, University College.

UNIVERSITY OF OXFORD.—In a congregation held on the 17th ult. the degree of D. Med. was conferred on

Henry John Tylden, Exeter.

UNIVERSITY OF DUBLIN.—At a meeting of the Senate recently the following degrees were conferred:—

Bachelor in Obstetrics.—Abraham W. Bate.

Bachelor in Surgery.—Dionysius Lionel Fitzgerald.

Bachelor in Medicine.—Abraham William Bate, John Simpson Jackson, Frederick Edward Rainsford.

Bachelor in Medicine, Surgery, and Obstetrics.—Bernard Robert Chatterton, Patrick Bernard Considine, Henry Croly, Alfred John Davoren, Raymond Alexander Dowdall, James Augustine Haran, Frederick William Kennedy, Patrick Percy Kilkelly, Joseph John Long, Michael Archdale Morris, Cecil Orpin, Victor John Rutledge, William Arthur Valentine, William Arthur Winter.

In absentiâ.—Rev. Kenneth William Stewart (stip. cond.).

Doctor in Medicine.—Edward Litton Luther, Samuel Wm. Robinson.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the December sittings of the examiners in Public Health, the following gentlemen were admitted diplomates in Public Health:—

John Alexander, M.D., Wick.
Francis Hollingsworth May, L.R.C.P., Birmingham.

SOCIETY OF APOTHECARIES OF LONDON.—EXAMINATION IN ARTS.—The following have passed in all the subjects required for registration:—

First Class (in order of merit).—F. C. Blakiston, E. S. Crispin, J. C. Hollocombe, B. H. E. Evans.

Second Class (in alphabetical order).—M. C. B. Anderson, H. L. Apthorp, A. Atherton, C. E. Carter, M. S. Coghill, G. E. Duncan, W. R. Field, A. H. Gadsden, J. P. E. Henery, B. Hogan, J. B. B. Howat, T. W. Hyde, E. Joseph, L. F. Leslie, H. R. Marsh, H. R. Miller, J. Milligan, P. D. Pywell, A. L. Rozelaar, F. S. Vine, H. J. Walker, F. E. Wayte, E. M. Wells, R. G. Whiting.

WOLVERHAMPTON INFECTIOUS DISEASES HOSPITAL. The new buildings at the Borough Hospital for Infectious Diseases, Green-lane, Wolverhampton, were formally opened on Wednesday by Alderman Major, the chairman of the Sanitary Committee, in the presence of a number of members of the Town Council and corporation officials. The additions which have been made to the hospital comprise an entrance-lodge, enlargement of the administrative block, and a hospital pavilion.

TRAFFICKING IN DEAD BODIES.—At the Glasgow High Court on the 21st ult., John Daniel was charged with a contravention of the Anatomy Act by delivering bodies from the Glasgow City Poor-house for dissection without the certificate required by the Act. After a long trial the judge imposed a sentence of fourteen days' imprisonment. It was stated that Daniel pretended to take the bodies away for burial, but removed them instead to the dissecting house, receiving a fee for each.

LEEDS IMPROVEMENT BILL.—In addition to providing further hospital accommodation, whether temporary or permanent, for the treatment and isolation of persons suffering from infectious diseases, the Corporation desire to make further provisions as to the removal and burial of dead bodies, for preventing the letting of infected premises, for the disinfection of refuse, for cleansing and disinfecting bedding, clothing, and premises, with power of entry, for which purposes the Infectious Diseases Notification Act (1889) and the Infectious Diseases Prevention Act (1890) are incorporated.

THE KILMARNOCK INFIRMARY.—Great activity has prevailed in the several departments of this institution, during the past year. The number of cases treated was considerably above the previous year, and the financial prospects show an improvement. In the annual report for 1890 reference was made to the generosity of the Dowager Lady Scott Howard de Walden to build an important addition to the infirmary, the chief features of which are a handsome children's ward, dormitories for nine nurses, and new domestic offices; also new laboratory arrangements both for the new extension and the old edifice. Three ladies in the district have contributed £1000 each for the purpose of endowing cots. A hearty response was made by the working classes to the request of the directors for additional financial aid, which has already, to some extent, been carried out. The capital account amounted to £10,105.

PRESENTATIONS.—Dr. Henry White, of Manningham-lane, Bradford, the honorary instructor of the two ambulance classes composed of employés in the service of the Midland Railway Company at Manningham, and under the auspices of the St. John Ambulance Association and the patronage of the railway company, has been presented with an elegant oaken cigar chest, well stocked with cigars, by the members of the classes in appreciation of his painstaking and efficient instruction on first aid ambulance work. —Mr. A. W. Stocks, M.R.C.S., has received a presentation from the honorary medical staff of the Salford Royal Hospital on the occasion of his resigning the office of honorary surgeon after a prolonged service of thirty-five years devoted to the institution, and the unique position he had occupied for upwards of twenty years as senior honorary surgeon and chairman of the medical board.

ROYAL INSTITUTION.—A course of six lectures on "Life in Motion," adapted to a juvenile audience, was commenced on Tuesday, Dec. 29th, by John G. McKendrick, M.D., LL.D., F.R.S., Professor of Physiology in the University of Glasgow. The lecture, which was introductory in character, dealt with the movements characteristic of living beings. Various interesting demonstrations were made of the action of muscular tissue and the electrical stimulation to contraction through the nerves, and also to the muscle direct. The production of tetanus or spasm was clearly shown by a very delicate instrument sent direct from Berlin. The experiments were all very satisfactory, and delighted and instructed not only the juveniles present, who occupied the front benches, but also the adult part of the audience, which entirely filled the rest of the theatre. The subject was resumed on Thursday, and the lectures are to be delivered every alternate day till the end of next week.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand.

Ophthalmic Notes. By A. Vernon Ford, M.R.C.S., L.K.Q.C.P. Irel. 1891. pp. 107.

A Manual of Physics. By Wm. Peddie, D.Sc., F.R.S.E. 1892. pp. 501.

CHURCHILL, J. & A., New Burlington-street, London.

Abdominal Surgery. By J. Greig Smith, M.A., F.R.S.E. Fourth Edition. 1891. pp. 806.

Year-book of Pharmacy, from July 1st, 1890, to June 30th, 1891. With the Transactions of the British Pharmaceutical Conference at Cardiff, August, 1891. pp. 596.

A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.C.P., F.R.S. Second Edition. Vol. I.: Spinal Cord and Nerves. 1892. pp. 616.

LEA BROTHERS & CO., Philadelphia.

Human Monstrosities. By B. C. Hirst, M.D., and G. A. Piersol, M.D. Part I. Illustrated. 1891. pp. 88.

MURRAY, JOHN, Albemarle-street, London.

Journeys in Persia and Kurdistan. By Mrs. Bishop (Isabella L. Bird.) In Two Vols. I. and II. Illustrated. 1891.

PENTLAND, YOUNG J., Edinburgh and London.

Diseases of the Throat, Nose, and Ear. By P. McBride, M.D., F.R.C.P. Edin. Pentland's Medical Series. Illustrated. Vol. III. 1892. pp. 640.

SMITH, ELDER, & CO., Waterloo-place, London.

Dictionary of National Biography. Edited by Sidney Lee. Vol. XXIX. Inglis—John. 1892. pp. 457.

The Journal of the College of Science, Imperial University, Japan; Vol. IV., Part II. (published by the University, Tokyō, Japan, 1891).—Professional Memoranda, 1892 (Burroughs, Wellcome & Co., London).—Index Medicus: Authors and Subjects; Vol. XIII., No. 11, November, 1891 (Trübner & Co., and Lewis, London).—Une Mission en Espagne; L'Hygiène Scolaire et les Exercices Physiques; par Dr. C. Delvaille (C. Delagrave, Paris, 1892).—Cutaneous Tuberculosis; reprint (Damrell & Upham, Boston, U.S.A., 1891).—Studies from the Pathological Laboratory of the College of Physicians and Surgeons, Columbia College, New York: for the Collegiate Year 1890–91; reprints.—Catechism Series, Public Health; Part III., Sewage and its Treatment; Part IV., Vital Statistics (E. & S. Livingstone, Edinburgh); price 1s. each, net.—Magazines for January: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister); Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society); Scribner's.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, JAMES, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for Footscray, Victoria, Australia.

BODY, H. M., M.R.C.S., has been appointed Medical Officer to the Crediton Improvement Commissioners.

BOWLBY, A. A., F.R.C.S., has been appointed an Assistant Surgeon to St. Bartholomew's Hospital.

BROOKE, WILLIAM, M.D. Irel., L.C.R..P., L.R.C.S. Edin., has been appointed Medical Officer for the Third Sanitary District of the Oldham Union.

DAVIES, T. B. P., M.B., B.S. Lond., has been appointed Assistant House Surgeon to Guy's Hospital.

DICKSON, B. D., M.D. Dub., L.K.Q.C.P. Irel., has been appointed Health Officer for the Bet-Bet Shire, Victoria, Australia.

FULLERTON, ANDREW, M.B., B.Ch., B.A.O., has been reappointed Senior House Surgeon to the Miller Hospital and Royal Kent Dispensary.

GARTH, H. C., M.B., C.M., has been appointed Junior House Surgeon to the Miller Hospital and Royal Kent Dispensary, vice C. Evans, resigned.

HANSON, A. STEPHEN, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator for the Titchfield District of the Fareham Union, vice Wm. Hoare, resigned.

HASLAM, WILLIAM F., F.R.C.S., has been appointed Surgeon to the General Hospital, Birmingham, vice Oliver Pemberton, F.R.C.S., resigned.

HODGSON, H., M.B., B.S. Lond., has been appointed House Surgeon to Guy's Hospital.

HUNGERFORD, L. M. T., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Resident Medical Officer and Public Vaccinator for the Urban and Suburban Districts of Dongara and Rural District of Irwin, Western Australia.

JOHNSON, H. OSWIN, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Gloucester General Infirmary, vice J. L. Adam, resigned.

KELLY, C., M.D. Lond., F.R.C.P., M.R.C.S., has been reappointed Medical Officer of Health for the Horsham Sanitary District.

LAYCOCK, G. L., M.B., C.M. Edin., has been appointed Honorary Medical Officer to the Melbourne Children's Hospital, Victoria, Australia.

LONG, D. S., M.B., B.C. Cantab., has been appointed House Physician to Guy's Hospital.

MACGREGOR, R. D., M.B., C.M. Edin., has been appointed, *pro tem.*, Health Officer for the Alberton Shire, Victoria, Australia.

MAHOOD, ALLAN E., M.B., M.Ch., M.R.C.S., has been appointed House Surgeon to the Queen's Hospital, Birmingham.

M'CLOSKY, A. J., M.B., C.M. Edin., has been appointed Acting Colonial Surgeon, Penang, Straits Settlements.

M'CLOSKY, D. H., L.R.C.P. & S. Edin., F.P.S. Glasg., has been appointed Medical Officer, Aindings, Straits Settlements.

PERCIVAL, ARCHD. S., M.A., M.B., B.C. Camb., M.R.C.S., has been appointed Honorary Ophthalmic Surgeon to the Hospital for Sick Children, Newcastle-on-Tyne.

PRIOR, C. E., M.D. Aberd., F.R.C.S., has been reappointed Medical Officer to the Woburn Sanitary Authority.

ROGERS, W. G., M.B., B.S. Lond., has been appointed House Surgeon to Guy's Hospital.

RUSSELL, R. H., L.R.C.P. Lond., F.R.C.S., has been appointed Honorary Medical Officer to the Melbourne Children's Hospital, Victoria, Australia.

SAMWAYS, D. W., M.B., B.C. Cantab., has been appointed House Physician to Guy's Hospital.

STEWART, JOHN, L.K.Q.C.P., L.R.C.S. Irel., has been appointed Health Officer for Walhallashire, Victoria, Australia.

THOMAS, A., M.B., B.S. Lond., has been appointed Assistant House Physician to Guy's Hospital.

THOMAS, ROBERT STANLEY, M.A., M.B., B.C. Cantab., has been appointed House Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

THOMPSON, J. E., M.B. Lond., C.M., M.R.C.S., has been appointed House Surgeon to the Wolverhampton Eye Infirmary.

TRESIDER, H. J., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Dubbo; also Visiting Surgeon to the Dubbo Gaol, New South Wales.

TURNER, FREDK., M.R.C.S., has been reappointed Medical Officer of Health for the Buxton Urban Sanitary District.

WOOD, F. S., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to Guy's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board and lodging.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary £100 per annum, with board &c. (Apply to the Secretary, at the Office, 24, Finsbury-circus, E.C.)

DENTAL HOSPITAL OF LONDON, Leicester-square.—Assistant Dental Surgeon.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INFIRMARY.—Surgeon.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Second Assistant Medical Officer. Salary £200, with furnished rooms and lodging.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon for one year. Salary £50 per annum, with board and residence in the Hospital.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

NARBERTH UNION.—Medical Officer for District No. 4. Salary £35 per annum, with certain extra fees. The person elected will also be appointed Medical Officer of Health for the said district, at an additional salary of £20 per annum. (Apply to the Clerk, at the Union Office, 3, St. James-street, Narberth.)

ROYAL ALPERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Board, residence, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BUXTON.—On Dec. 26th, at Mortimer-street, Cavendish-square, the wife of Dudley Wilmot Buxton, M.D., of a son.

DUNLOP.—On Dec. 26th, at Stafford-street, Edinburgh, the wife of James Craufurd Dunlop, F.R.C.P., of a daughter.

JOULE.—On Dec. 24th, at Maida-hill West, W., the wife of John S. Joule, M.D. Lond., of a daughter.

MINTER.—On Dec. 25th, at Leigham-street, Plymouth, the wife of E. D. Minter, Surgeon Royal Navy, H.M.S. *Cambridge*, of a son.

PAUL.—On Dec. 30th, at 38, Rodney-street, Liverpool, the wife of F. T. Paul, F.R.C.S., of a daughter.

PEDLEY.—On Dec. 4th, at Rangoon, Burmah, the wife of Dr. T. F. Pedley of a son.

SMYTH.—On Dec. 29th, at Castleacre, Adelaide-road, Brockley, S.E., the wife of Francis Sydney Smyth, F.R.C.S., of a daughter.

MARRIAGES.

GARRETT—GRAVELY.—On Dec. 16th, at St. Peter's Church, Cowfold, Philip Gell Garrett, M.R.C.S., L.R.C.P., eldest son of the Rev. Jos. Garrett, to Fanny Maria, daughter of Thos. Gravely, M.R.C.S., L.S.A., of Cowfold.

LOWNDS—STRAFFORD.—On Dec. 28th, at the Parish Church, Putney, Charles James Lownds, B.A., L.R.C.P. of Kirkburton, Yorkshire,, second son of Dr. Lownds, of Wateringbury, Kent, to Alice Gertrude, third daughter of Thomas William Strafford, Esq., of Putney.

RICHARDSON—PAPE.—On Dec. 16th, at Fulham Parish Church, John Charles Ryder Richardson, M.A., M.B., B.C. Cantab, of Benenden, Staplehurst, Kent, son of the late William Ryder Richardson, of Whalley Range, Manchester, to Mary Elizabeth, daughter of the late David Pape, of Keswick.

DEATHS.

BROWN.—On Christmas Day, at Ascot, William Barr Brown, L.S.A., M.R.C.S., in the 85th year of his age.

BRUNTON.—On Dec. 15th, at Kirkdale, Sydenham, William Riddell Brunton, M.R.C.S., L.S.A., St. George's Hospital, &c., late Brigade Surgeon East Surrey Volunteer Brigade, aged 59, eldest son of the late Lieut. John Brunton, R.N., formerly Commander of H.M. Revenue cutter *Mermaid*, and afterwards Governor of the Northumberland County Prison, Morpeth.

BURTT.—On Dec. 11th, at Chard, Somerset, G. R. Burtt, L.R.C.P.Edin., M.R.C.S., aged 78.

DOBBIE.—On Dec. 11th, at the County Hospital, Ayr, Robert Dobbie, M.D., L.R.C.S. Edin., aged 60.

HARDIE.—On Dec. 26th, at his residence, Florence-road, Ealing, Gordon Kenmure Hardie, M.D., Deputy Inspector-General, retired, in the 69th year of his age.

IMLACH.—On Dec. 24th, at Edinburgh, suddenly, Francis Brodie Imlach, F.R.C.S., aged 71.

LANGMORE.—On Dec. 28th, at Domdaire, College-road, Upper Norwood William Butler Langmore, M.R.C.S., in his 80th year.

RICHARD.—On Dec. 22nd, at his residence, Dumbarton, Benjamin M. Richard, L.F.P.S., L.M. Glasg., aged 39.

SKAE.—On Dec. 19th, at Lerwick, Shetland, F. D. A. Skae, M.D. L.R.C.S. Edin.

WATSON.—On Dec. 23rd, at Isleham, Cambs., Edward Watson, M.R.C.S., L.S.A., formerly of North Somercotes, Lincs., aged 76.

WOOD.—On Dec. 29th, at his residence, Wimpole-street, John Wood, F.R.S., F.R.C.S., aged 66.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on December 29th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	227	60	..	46	2	335	442
North-Western Hospital	288	41	..	16	1	346	411
Western ,,	109	15	..	25	1	150	224
South-Western ,,	211	42	..	30	2	285	340
South-Eastern ,,	198	20	4	89	1	312	454
Northern ,,	413	19	..	21	..	453	480
Totals	1446	197	4	227	7	1881	2351

SMALL-POX.—*Atlas* hospital ship, 1

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 31st, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 25	30·11	N.E.	27	..	..	46	23		Foggy
,, 26	30·00	S.W.	46	45	57	49	27	·05	Cloudy
,, 27	29·75	S.W.	41	40	53	46	40	·09	Cloudy
,, 28	29·89	S.W.	40	39	57	53	39	·04	Cloudy
,, 29	29·69	S.W.	52	51	66	54	40	·03	Overcast
,, 30	29·72	S.W.	48	47	..	56	47	·03	Raining
,, 31	29·51	S.W.	54	52	57	54	48	·34	Raining

Medical Diary for the ensuing Week.

Monday, January 4.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Professor W. Rose: The Surgical Treatment of Trigeminal Neuralgia. (First Lettsomian Lecture.)

Tuesday, January 5.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M., Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

PATHOLOGICAL SOCIETY OF LONDON.—Mr. Chas. A. Morton: Tubercular Ulceration of the Tongue, with Sections showing Bacilli.—Dr. H. Rolleston: Sarcoma of Duodenum.—Mr. Raymond Johnson: Pathological Condition in the Mamma associated with Carcinoma.—Mr. C. F. Beadles: Some Histological Changes found in the Breast in association with Glandular Carcinoma.—Dr. G. B. White: A Mamma with a Carcinomatous and Two Adenomatous Growths in it. Card Specimen:—Dr. R. G. Hebbs: Microscopical Sections of Tubercular Endocarditis.

SOCIETY FOR THE STUDY OF INEBRIETY (Rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W.).—4 P.M. Dr. James Stewart (Clifton): The Prevention of the Development of Inebriety.

Wednesday, January 6.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Shaw-Mackenzie, Dr. Heywood Smith, Mr. J. Bland Sutton, Dr. G. Beale, Mr. Butler-Smythe, and others. Dr. Herman: On the Relation between Backward Displacements of the Uterus and Prolonged Hæmorrhage after Delivery and Abortion.—Dr. J. Inglis Parsons: Twenty cases of Fibroma and other Morbid Conditions of the Uterus treated by Apostoli's Method.—Dr. Lewers: Six cases of Craniotomy, with Remarks on the Relative Position of Craniotomy and Cæsarean Section.

Thursday, January 7.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY OF LONDON.—Clinical Evening. Cases will be shown by Dr. Savill, Dr. Waterhouse, Mr. Costelloe Shaw, and others.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

Friday, January 8.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—Sir Dyce Duckworth: A case of Gout of the Penis.—Mr. Bland Sutton: A case of Fracture of the Skull complicated with Hæmorrhage from the Middle Meningeal Artery; Trephining, Recovery.—Mr. F. Bowreman Jessett: Five cases of Gastro-enterostomy and Two cases of Jejunostomy for Carcinoma of Stomach.—Mr. Herbert Allingham: A case of Punctured Wound of the Thigh; Femoral Artery and Vein Divided; Ligature of Proximal and Distal Ends; Gangrene of Leg; Amputation through Knee-joint.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich).—8 P.M. Dr. Dundas Grant: New Instruments and Methods of Diagnosis and Treatment for Diseases of the Throat, Nose, and Ear.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board Room, West London Hospital).—8 P.M. Mr. Bruce Clarke: Indications for Different Kinds of Treatment in Urethral Stricture.—Mr. Edmund Owen: A case of Cervical Caries and Post-pharyngeal Abscess.

Saturday, January 9.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Professor John G. McKendrick: Life in Motion, or the Animal Machine.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE LANCET DURING 1891.

THE following particulars of the work of THE LANCET during the past year have been forwarded to us from a correspondent; and as they are likely to prove of interest to our readers we, after categorically verifying the accuracy of the figures, publish them. From the figures submitted it appears that in the year 1887 THE LANCET contained 11,744 columns, in 1888 it contained 12,376, in 1889 it rose to 13,728 columns, and in 1890 the figure reached was 14,032 columns. The year 1891 shows a still higher figure, a total of 14,304 columns, 5980 of which were devoted to purely literary matters, 8324 columns contained advertisements, and space amounting to nearly 150 columns was required for the purpose of an index. From these figures a simple calculation will show that the average size of each weekly impression has amounted to 137 pages. Looking at the impressions individually it will be found that two of the numbers contain 200 pages each—namely, those of January 1st and September 5th. No single number of THE LANCET of corresponding size has ever before been offered to the subscribers. Of the other numbers there were three of 152 pages, two of 144 pages, thirty-three of 136 pages, ten of 128 pages, and two of 120 pages. THE LANCET last year was permanently enlarged to 112 pages, but that figure has been exceeded by every number issued during the year 1891. One very marked feature in THE LANCET for 1891 was the publication of two Special Supplements in aid of the

Metropolitan Hospital Sunday Fund, the second of which contained a selection of sermons preached in aid of this fund. Another Supplement (following up and detailing the results of the Special Supplement of the previous year devoted to these subjects) dealt with life assurance and the medical profession. The columns of literary matter include reports of clinical lectures extending over 583 columns; nearly 846 were devoted to Clinical Notes, and about 590 to Original Articles. The department of the Mirror of Hospital Practice occupies over 310 columns, and no less than 208 have this year been devoted to Analytical Articles and Pharmacology. Leading Articles and Annotations have taken up about 965 columns, and 190 were devoted to Critical Reviews of Books bearing on Medical Science. The Correspondence columns exceed 511, and Articles on the Public Health to the extent of 215 columns have been printed. The Reports of the General Medical Council extended to 47 columns; of the Meeting of the British Medical Association to 35 columns, and a Special and Full Report of the International Congress of Hygiene occupied nearly 400 columns of THE LANCET. Matter to the extent of 5394 columns has thus been accounted for, the remaining 586 columns having been devoted to Obituary Notices, Miscellaneous Medical News, Law Reports on Medical Questions, and Parliamentary News, of Interest to the Profession.

A Subscriber.—The question is more legal than medical. But we will not shrink from giving our opinion. We do not quite agree with our correspondent. The other party was acting for him, and he has undergone a very serious ordeal of suffering and injury—which he certainly never bargained for in undertaking, as he did kindly, to officiate for a friend. The three facts mentioned do not, it seems to us, alter the case. The acceptance of responsibility for the full payment may involve inconvenience and hardship to our correspondent, but it will give him lasting satisfaction. It is one thing to ask a friend to undertake the duty of a *locum tenens*, and another to hold him responsible for all legal consequences.

Professor Middendorp.—The copy of the monograph has not been received.

Mr. E. H. N. (Dijon).—We do not give medical advice.

"CURRENT FROM THE MAIN."

To the Editors of THE LANCET.

SIRS,—With reference to my communication in THE LANCET of the 19th ult., I find that it would have been more in accordance with what is occurring in actual practice at the present time to have instanced the supposed incandescent lamp as requiring about 60 watts instead of 50. This does not affect the conclusions arrived at, as even 600 milliampères is still within the safety limit under the conditions named. I am, Sirs, yours faithfully,

Brighton, Dec. 29th, 1891. W. S. HEDLEY, M.D.

AN EIGHTEENTH-CENTURY POET'S PRECEPTS FOR THE MAINTENANCE OF GOOD HEALTH.

PREVENTION is better than cure, and it may be worth while to transcribe some good hygienic rules, formulated by Monsieur l'Abbé de Grécourt, in his work published in 1772. They run as follows:—

TISANE INFALLIBLE CONTRE TOUTES SORTES DE MALADIES.

Prenez deux grains d'indifférence,
Autant de résolution,
Dont vous ferez infusion
Avec du suc de patience.
Point de procès, point de querelle,
D'ambition, point de faux zèle,
Demi-livre de gaieté,
Deux onces de société,
Avec deux dragmes d'exercise:
Point de femme, point d'avarice,
Un bon grain de dévotion,
Point de nouvelle opinion.
Vous mêlerez le tout ensemble,
En l'infusant, si bon vous semble,
Avec deux doigts du meilleur vin,
Que vous prendrez chaque matin.
Vous verrez que cette pratique,
Au médecin fera la nique [mockery].

One who Wishes to do Right.—The title "doctor" is not warranted. Surgeon and apothecary are the safe titles; others are questionable.

INCOME-TAX.

To the Editors of THE LANCET.

SIRS,—As in this district we have a new surveyor of taxes, who is very active in "putting on the screw," I advise my professional brethren to see that their life assurance premiums are properly deducted in the demand notes now being sent out before the tax is due.

I am, Sirs, yours obediently,

Dec. 29th, 1891. MARYLEBONE.

SPIRIT-WRITING IN THE FIFTEENTH CENTURY.

THE history of imposture and fraud, like the history of peoples and kingdoms, repeats itself, and there is nothing new under the sun. So that we are not surprised to find that the spirit-writing and precipitated letters were quite well known four centuries ago, as the following letter, taken from the Colloquies of Erasmus, which is worth quoting in part, shows:—

"From the Imperial Heaven, Ides of September, Anno 1498. Under the Seal of my own ring.

"Faunus, long a captive, but now free. To Faunus his gracious deliverer, sends eternal health. .... God has respected the pious intention of thy mind, and has delivered me from torments; and I now live happily among the angels. Thou hast a place appointed thee with St. Austin. .... In the meantime live merrily."

It is interesting to observe that it was transcribed, not on ordinary paper, but on a peculiar reddish paper, like that which "goldbeaters put their leaf in," and written in a strange antique character. There is no reason to believe that Erasmus fabricated the story of this imposture; the local colouring gives it an air of reality, and, as he says he was in company with men of judgment when the first part of the play was enacted, we can fancy his relating to Dean Colet and others of his learned friends this tale of the portentous apparition, the rumour of which in three days' time had spread over all England, and which was the prelude to the "precipitated" letter quoted above. We can also picture from his written account the merriment it created among that circle of wits, in no wise tender towards imposture or superstition, and especially delighted to have such a fling at the credulity of a priest. It is much to be desired that similar spirit communications and believers in them of the present day could be treated in the same wholesome manner.

D. W.—Unless otherwise stipulated by agreement, all fees are understood to be claimed by the principal. We state the rule, though it must be conceded that in some cases it bears hardly on assistants.

A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—I was much interested in Mr. Heath's suggestion of "digital pressure on the posterior half of the perineum as an aid to defecation." Let me suggest that the same effect can be produced by placing that portion of the perineum on the posterior edge of an oval commode, and, further, that the seat of an utensil can be made much more effectual for this purpose by having the slightest convex prominence at its posterior end. This can be added without the slightest discomfort to the patient. I am, Sirs, yours truly,

W. MURRAY, M.D., F.R.C.P.Lond.

Barrasford, Northumberland, Dec. 23rd, 1891.

IMPERFORATE ANUS.

Mr. W. G. Nash writes to draw our attention to the case which we published in the "Mirror of Hospital Practice," vol. i., 1891, p. 143, which bears a great similarity to the one which we inserted on p. 1335, vol. ii., and which had been under the care of Mr. Elliot.

Gwen Quinton might put her question to the editor of the *Nursing Record*, 11, Ludgate-hill, E.C.

A Subscriber.—Surely the "term now generally adopted" is "Death *under* Chloroform."

Mr. J. D. Lambert is thanked.

TREATMENT OF THREADWORM.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 19th, 1891, p. 1410, there is a reference to naphthalin as an anthelmintic, and it is there stated that it is very efficacious for the removal of threadworm. Will anyone who has used it for this purpose kindly give his experience as to its efficacy, mode of administration, and dose for young children? I have been treating two children (both under six years) with all the ordinary remedies for some time, but with little success. Any hints for treatment would be esteemed. I am, Sirs, yours faithfully,

Dec., 1891. X.

W. S. B.—We are not aware of its prevalence at Cheltenham or Malvern.

Mr. A. E. Edwards.—We cannot promise acceptance of the paper.

THE CLIMATE OF JAVA.

To the Editors of THE LANCET.

SIRS,—Could any of your readers give an intending visitor any information with regard to the climate of Java? The duration of the stay on the island would only be a few weeks. Would such a visit entail any exceptional risk to health, and which is the most favourable season for such a visit? I am, Sirs, yours faithfully,

Dec. 29th, 1891. VIATOR.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Messrs. Allen and Hanburys, London; Mr. Anglis, Bengley; Messrs. Armstrong and Harle, Newcastle; Mr. Beattie, Durham; Messrs. Burroughs and Wellcome, London; Mr. Birchall, Liverpool; Messrs. Burgoyne and Co., London; Professor Baliadhurdji, Bombay; Messrs. Benson and Co., London; Mr. Bottom; Mr. A. E. Barker, London; Mr. Lennox Browne, London; Mr. J. W. Barnes, London; Sir Andrew Clark, London; Mr. Clegg, Windermere; Mr. Cowell, London; Mr. Coupland, Guiseley; Dr. J. A. Campbell, Garlands; Mr. Crockwell, Manchester; Sir Dyce Duckworth, London; Mr. A. Duke, Dublin; Messrs. Down Bros., London; Dr. Giovanni Di Bona, Terranova; Messrs. Du Lau and Co., London; Mr. Doyle, Newcastle, N.S.W.; Dr. Divecha, Bombay; Messrs. Foster, Brown, and Co., Montreal; Mr. Forward, Ledbury; Mr. Fleming, Bath; Mr. Greenwood, London; Dr. Dundas Grant, London; Mr. Gravatt, Cheapside; Mr. Hornibrook, London; Dr. Hedley, Brighton; Mr. Hornibrook, London; Mr. Harris, Cranbrook; Dr. Herring, London; Van Houten, London; Mr. Holmes, Manchester; Dr. Harris, London; Mr. H. L. Jones, London; Mr. J. R. Lunn; Mr. Lyon, London; Mr. Lamb, London; Mr. Leggott, Hipperholme; Mr. R. Lake, Barnes; Mr. Lewis, London; Messrs. Mayer and Meltzer; Mr. Mackay, London; Mr. W. B. Mercer; Messrs. MacFarlan and Co., London; Mr. Morton, Glasgow; Messrs. Mackey, Mackey, and Co., London; Mr. Macpherson, Larbert, N.B. Dr. W. Murray, Barrasford; Mr. Macaulay, Halifax; Mr. Martindale, London; Mr. J. Murphy, London; Mr. Mendelssohns, London; Messrs. Negretti and Zambra, London; Dr. Nadersha, Bombay; Mr. H. Needes, London; Mr. Nair, Edinburgh; Mr. W. G. Nash, Newport; Messrs. Oliver and Boyd, Edinburhh; Mr. Opie, Worthing; Messrs. Orridge and Co., London; Dr. Owens, Norfolk; Messrs. Oppenheimer, Son, and Co., London; Mr. Phelps, London; Mr. Paul, Liverpool; Mr. Bilton Pollard, London; Dr. Pye-Smith, London; Dr. Philipps, Virginia Water; Messrs. Potter and Sacker, London; Messrs. Putnam's Sons, London; Mr. Stephen Paget, London; Mr. Ross, Cumineatown; Mr. J. A. Richardson, Croydon; Dr. Rentoul, Liverpool; Mr. J. P. Richards, Hanwell; Dr. Cartwright Reed, Haschil; Mr. E. B. de la Rivière, Pierrefeu; Messrs. Rowntree and Co., York; Sir J. Sawyer, Birmingham; Dr. Steele, Florence; Mr. Thomson, Strand; Mr. H. Sewill, London; Mr. Thomas, Narberth; Messrs. W. H. Smith and Sons, London; Mr. Sell, London; Dr. Saady, Safed; Messrs. Street and Co., London; Dr. Schmid, Seeburg; Mr. Scripps, London; Dr. H. Stowers, London; Mr. Lawson Tait, Birmingham; Mr. Tate, Nottingham; Mr. Tate, Sheffield; Mr. Vickers, London; Mr. Van, Durham; Dr. R. M. Williams, London; Mr. Williamson, Bradford; Mr. Roger Williams, London; Mr. R. Williams, Liverpool; Messrs. Wright and Co., Bristol; Mr. Whiteley, Downton; Dr. Wells, London; Dr. Sims Woodhead, London; Mr. Welchmann, Heckington; Messrs. Wyleys, Coventry; Mr. Walker, Wakefield; Mr. White, Wolverhampton; M.D., Deptford; K. L., London; Querens, London; Liquor Carnis Co., London; A. W., London; B., London; Maltine Manufacturing Co., London; Lakes, London; Micro-organism; Reuter's Telegram Co., London; A Subscriber; A. E. M.; Viator; W. S. B.; *Courant* Offices, Chester; B. M., London; Cosmos, London; A. B., South Norwood; Secretary, Royal Albert Hospital, Devonport; Sanitas Co., London; Mutual Life Asaurance Association, London; Lady Superintendent, Manchester; Marylebone; Pulsometer Engineering Co., London; St. Andrew's Hospital, Birmingham; Secretary, Hydropathic Establishment, Bournemouth.

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NEWSPAPERS.—*Sussex Daily News, Liverpool Mercury, Western Morning News, South Wales Daily News, Dundee Advertiser, Bristol Times and Mirror, Times (New York), Irish Times, Manchester Guardian, West Middlesex Standard, Scotsman, Midland Evening News, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Windsor and Eton Express, Scottish Leader, Liverpool Daily Post, Bristol Mercury, Surrey Advertiser, Metropolitan, Liverpool Daily Post, Leeds Mercury, Law Journal, Mining Journal, Hertfordshire Mercury, Builder, Broad Arrow, Chemist and Druggist, Sunday Times, Windsor and Eton Gazette, West Middlesex Advertiser, Architect, Spectator, Saturday Review, Pharmaceutical Journal, City Press, Insurance Record, Kilmarnock Standard, Liverpool Courier, Lightning, Standard Union (Brooklyn), Argus (Melbourne), News of the World, Liverpool Echo, Court Journal, Building News, North Wales Chronicle, Dramatic Review, Irish News, Whitby Gazette, Norfolk News, Edinburgh Evening Dispatch, Wolverhampton Chronicle, &c.*, have been received.

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